PROCESSOR®

Products, News & Information Data Centers Can Trust.   **Since 1979**

Security On The Whole

A Holistic Approach Can Bring Better Lockdowns For Your Data Center

by Elizabeth Millard
• • •

WITH THE PROLIFERATION of data breaches and vulnerability alerts, businesses have an increased need for data security at all levels of the data center. The necessity for stronger protection is creating demand for what industry experts are calling a holistic approach to data security. By tying together different elements of a security strategy, a small to medium-sized enterprise can create stronger, more cohesive controls that tackle both internal and external network threats.

Getting Definition

A holistic approach is pretty much just what the term implies: a strategy that protects machines in an office environment so that no data is exposed and which does so by combining a number of products that each augment one another.

"In addition to software, role-based security should be implemented using available tools in the Microsoft operating system, such as policies and active domains, so that each employee has access only to those components required to do his or her job," says Helmuth Freericks, CTO at Authentium Software. Finally, education and training are also included in a holistic approach, including the creation of best practices, he says.

Basically, holistic security embraces the theory that a cohesive response to threats

Tape & Hard Disk Degaussing

Protect Your Information At Every Step

by John Brandon
• • •

CONCERNS OVER DATA security are still rising in data centers, and for good reason. There's been an increase in wireless network wardriving on corporate campuses. Hackers routinely steal laptops in airports, exposing sensitive business data to illegal use. New data-destroying viruses can penetrate some existing firewalls. Yet, one often overlooked security hole is when a data center sells or discards a server, laptop, or desktop system or discards backup tapes. In some cases, admins erase hard disks and tapes merely by running a delete command before offloading the equipment.

Recently, data centers have become more savvy about this data security loophole, however. News reports about consumers selling laptops on eBay and then discovering that hackers are using their credit cards and Social Security numbers have served as a wake-up call for data centers. Of course, identity theft for a consumer is one thing, but when business data is compromised, there are even greater repercussions. Some administrators use disk-destroying devices to make sure no one can ever steal company information. Yet, there's an even more effective means.

Three Degaussing Options

Degaussing is the process of erasing a hard disk or backup tape, typically using a powerful magnetic field that removes all traces of data. The word "degauss" itself means to neutralize a magnetic field. It works exactly like the degauss button on old CRT monitors, except that the emission can run as high as 11,500 gauss.

There are three main degaussing methods available.

The Fujitsu Mag EraSURE is a powerful bulk degausser for erasing multiple hard disks in an unattained operation.

Product Releases | 15

■ **A10 Networks** introduced an upgraded version of its IDSentrie 1000 appliance. ■ **Altiris** unveiled its Endpoint Security Solution, software that lets users coordinate protection of their vulnerable systems and crucial data. ■ **Anritsu** released its NetClaw Network and Service Performance Analyzer. ■ **Avocent** introduced new features for its DSView 3 management software. ■ **Foundry Networks** introduced the new SecureIron Perimeter Traffic Manager devices to improve WAN operation and security. ■ **Rittal** developed a new pretreatment procedure to enhance service life and ideal functionality of its systems. ■ **Sans Digital** released a new eSATA 5-bay storage tower. ■ **Senforce** introduced its Endpoint Security Suite v3.2. ■ **Ultra Products** released a family of Ultra UPS models with monitoring software and a limited warranty against damaged equipment. ■ **WIN Enterprises** says its new scalable PL-01027 network appliance is suitable for NAS or security duty.

The Processor.com home page is updated each week with new articles and hardware news to help you keep current.
Visit www.processor.com today.

Subscribe Today / Address Change Form

For address change, fill out form below with new information and mail or fax.

PLEASE PRINT

Phone: (_____) _____　Fax: (_____) _____

Contact Name: _____

Company Name: _____

Address: _____

City: _____ State: _____ Postal Code: _____

Country: _____

Email: _____ Web Address: _____

1. What is the size of your company (how many employees)?
- ☐ Less than 10
- ☐ 10 - 99
- ☐ 100 - 199
- ☐ 200 - 499
- ☐ 500 - 999
- ☐ 1,000+

2. How often do you purchase computer hardware/software?
- ☐ Weekly
- ☐ Bi-weekly
- ☐ Monthly
- ☐ Quarterly
- ☐ Annually
- ☐ No Involvement

3. What is your annual computer hardware/ software purchasing budget?
- ☐ $0 - $9,999
- ☐ $10,000 - $24,999
- ☐ $25,000 - $49,999
- ☐ $50,000 - $99,999
- ☐ $100,000 - $249,999
- ☐ $250,000 - $499,999
- ☐ $500,000 - $999,000
- ☐ $1,000,000+

PROCESSOR.

Subscriptions: (800) 819-9014
Subscriptions Local: (402) 479-2170
Subscriptions Fax: (402) 479-2123
Mail Form To:
　P.O. Box 85518, Lincoln, NE 68501-5518
Overnight Delivery:
　120 West Harvest Drive, Lincoln, NE 68521

www.processor.com

Advertisers Index

MarketPlace ▲▼ NEWS

EU Regulators OK Microsoft Fine

ANTITRUST REGULATORS in each of the countries making up the European Union gave the go-ahead for the European Commission to fine Microsoft up to $2.6 million a day for not complying with its 2004 antitrust ruling. Microsoft has been working with the commission to develop technical information related to Microsoft's server products and is expected to provide additional information by July 18. Competition Commissioner Neelie Kroes says she "couldn't imagine another way" than fining Microsoft for failing to comply with the antitrust ruling. Regulators and commissioners have yet to decide on the size of the fine.

EU Considers Raising Cap On Microsoft Fines

IN RELATED MICROSOFT antitrust-case news, if the software giant continues to defy the EU Commission's decision from 2004 that Microsoft abused the dominant position it held in the market, the Commission may increase the daily limit on future fines. The current fine cap is $2.55 million a day, but the Commission could change it to $3.82 million per day. This case would be the first in which the Commission fines an organization for defying the Commission's command to remedy an offense.

AMD Sales Fall

FACED WITH INCREASING competition in the form of price cuts from rival Intel, AMD's second-quarter sales fell 9% from the previous quarter to about $1.2 billion. AMD had expected sales to be flat to slightly lower, in line with the typically slow second quarter. Sales of AMD's entry-level and mainstream processors suffered the biggest hits. On the server side, however, Opteron processor shipments set a record during the quarter.

Clearwire Gets Prominent Investors

IN AN EFFORT TO speed up development of Clearwire's WiMAX high-speed, wide-range network, Motorola and Intel announced that they will invest $900 million in the company. Intel's $600 million investment will be in cash, while Motorola did not reveal how much of its $300 million will be in cash. The WiMAX standard, unlike Wi-Fi, works over long distances and is able to carry both Internet data and mobile calls. Each WiMAX base station could potentially connect thousands of customers. According to the company, 175 WiMAX tests are currently being conducted worldwide.

Microsoft Betting On CRM

EXECUTIVES AT Microsoft have said that they believe Customer Relationship Management—specifically Microsoft's Dynamics CRM 3.0—has the potential to become the software giant's next billion-dollar applications opportunity. Although Microsoft's target market for its CRM and ERP products has traditionally been small to medium-sized enterprises, it is considering branching out to include larger enterprises, partly in an attempt to become associated with apps from companies such as Oracle, SAP, Siebel, and others. Microsoft currently has 180,000 CRM users globally and 7,000 CRM customer accounts.

SCO Faces Setback In Case Against IBM

SCO HAS FAILED TO show how IBM infringed on many of SCO's copyrights related to Unix, a Utah judge says. The judge threw out hundreds of claims made by SCO in the suit the company originally brought against IBM in 2003. SCO claims IBM used portions of copyrighted Unix code when developing the Linux OS. Judge Brooke Wells says SCO needed to show more details about specific code being violated. "SCO's arguments are akin to SCO telling IBM, 'Sorry, we are not going to tell you what you did wrong because you already know,'" Wells says.

Microsoft Makes Unified Communications Push

IN THE FIRST HALF OF next year, Microsoft plans to release several products that will make it possible for users to use a single identity no matter which communications tool they're using. Among the products being released: Microsoft Office Communications Server 2007, with VoIP call management, instant messaging, and conferencing features; Office Communicator 2007, offering VoIP softphone features; Office Live Meeting for PC audio and videoconferencing; and Office RoundTable, a hardware device designed for better audio and videoconferencing. Microsoft will release versions of Exchange Server and Speech Server late this year.

Click Fraud Poses Big Threat

RESEARCH FIRM Outsell released a study, "Click Fraud Reaches $1.3 billion, Dictates End of 'Don't Ask, Don't Tell' Era," that says online advertisers paid about $800 million last year for fraudulent clicks. The remaining $500 million of the $1.3 billion total represents the amount online advertisers have stopped spending on pay-per-click ads; 27% of the advertisers surveyed said they have reduced or stopped using such ads. The study estimates 14.6% of the clicks online advertisers are charged for are fraudulent. The majority of fraud in search advertising stems from Web sites clicking their own ads to inflate revenue.

The Rise Of Spim & Splog

ACCORDING TO mail services company MessageLabs, the focus of spammers is continuing to grow on new communication options, including IM and blogs. To avoid antispam measures people are using on email accounts, spammers are increasing activity in the form of spim (or IM spam) and splog (or blog spam). Another area where spammers have begun to lurk is social-networking sites, such as MySpace. Last month spam increased 6.9% from May to make up 64.8% of global email traffic.

HP To Downsize Real Estate

AS PART OF ITS plan to reduce costs, HP will begin to consolidate offices and maintain fewer "core sites." Money saved by combining and reducing office space will be used to upgrade core sites in an effort to make life easier for mobile workers. Changes will include additional technology in common areas and creating mobile workspaces. Current plans are to consolidate HP's 85 locations into six, and although sites will be located worldwide, HP has not released specific locations.

Intel Revamps Reseller Program

AFTER FOLLOWING THE same model for decades, Intel is restructuring its worldwide channel program. The new program will be overarching in its approach of an indirect go-to-market platform and will revise the qualification requirements program. Intel will split its Channel Partner Program into two sections: Systems Builders and Technology Partners, which refers to those that do not build but do sell Intel-based systems. The Systems Builders track will contain three partner classifications—Registered, Associate, and Premier—that will each have individualized key benefits.

Meetinghouse Acquired By Cisco

CISCO ANNOUNCED PLANS to acquire Meetinghouse. Meetinghouse is a part of the AAA (authentication, authorization, accounting) market with its client-side software supporting the 802.1x standard. The security vendor's AEGIS SecureConnect product line will be integrated into Cisco's wireless networking business. The resulting product line will simplify complexity and help address cost of ownership issues.

WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 16 major companies in the technology market.

Company	Symbol	Year Ago	June 30 $	July 10 $	% change from previous week
Avaya	AV	$7.99	$11.42	$10.84	▼ 5.08%
BEA Systems	BEAS	$8.87	$13.09	$12.31	▼ 5.96%
Computer Associates	CA	$27.87	$20.55	$20.08	▼ 2.29%
Cisco Systems	CSCO	$18.82	$19.53	$18.97	▼ 2.87%
Dell	DELL	$39.44	$24.46	$23.48	▼ 4.01%
Electronic Data Systems	EDS	$19.40	$24.06	$23.66	▼ 1.66%
Google	GOOG	$291.53	$419.33	$418.20	▼ 0.27%
HP	HPQ	$23.96	$31.68	$31.93	▲ 0.79%
IBM	IBM	$75.81	$76.82	$76.67	▼ 0.2%
Intel	INTC	$26.50	$19	$18.18	▼ 4.32%
McAfee	MFE	$27.18	$24.27	$23.26	▼ 4.16%
Microsoft	MSFT	$24.70	$23.30	$23.50	▲ 0.86%
Oracle	ORCL	$13.32	$14.49	$14.59	▲ 0.69%
Red Hat Software	RHAT	$14.43	$23.40	$21.50	▼ 8.12%
Sun Microsystems	SUNW	$3.70	$4.15	$3.82	▼ 7.95%
Symantec	SYMC	$21.49	$15.54	$15.03	▼ 3.28%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

Data Center Design Services Do It All

Picking The Right Company Is Key To A Successful Project

by Paul Ferrill Jr.

• • •

BUILDING A DATA CENTER of any size from the ground up is not a project undertaken without a lot of planning and design. The question is where to go to find a company with the right kind of expertise and experience to help with all the different aspects of that type of project. How do you know the company you choose can do the job?

An obvious answer to both questions is to look at what the company has done in the past. Most established design firms will gladly give you references to previous customers. Finding one that closely matches your project in size and scope will help give you an idea of what to expect. It should also give you additional insight into things to watch out for.

Many of the design aspects of a data center haven't changed much in the last 30 years. Features such as raised floors, 19-inch cabinets, backup power generators, and dedicated cooling still find their way into the newest designs. What's different is the equipment being packed into those racks and the power and cooling requirements that go along with them.

"One of the biggest trends is companies wanting to build out

Buying Tips

As you're checking out companies to do your data center design project, keep these tips in mind.

- Allow plenty of time for planning/constructing—18 months minimum.
- Choose a good design team in the beginning with a skilled designer that does data centers.
- Get the building construction team onboard early on to help control costs.
- Get the testing and commissioning folks involved early in the design process.
- Make sure your budget is adequate, and manage expectations.
- Incorporate scalable and modular construction so you can expand if needed.
- Identify long lead items and get them ordered.

data centers that take advantage of the latest high density blade servers to cram as much processing power into the smallest amount of space," says Chris Johnston, chief engineer for critical facilities at Syska Hennessy.

Primary purpose for the facility will be a big part of many design alternatives. If your business depends on the data center being available 24/7, you'll have to go with backup systems that can handle issues such as long power outages. That type of requirement will also drive you to redundant communication paths with different providers. All of these types

> ## "We don't have the luxury of being wrong when it comes to designing a data center for our clients. If we don't get it right before the construction begins, it puts the entire project at risk."
>
> *- EYP Mission Critical Facilities' Peter Gross*

of decisions will need to be made during the design phase.

Factors To Consider

Many key design decisions are often interlinked in ways that some companies hadn't considered. Weight can become a critical factor if you choose to pack as many high density blade servers as possible into a single rack. Raised flooring will have to be chosen that can support a higher number of pounds per square foot. Cooling systems will need to support not only a specific level of heat dissipation but also a certain level of airflow.

Backup power systems will have to provide continuous power to key system components such as the cooling system to avoid long outages caused by a system restart. Some companies are choosing to do their own power generation as one answer to the power reliability question. Others are opting for multistage backup systems with a combination of batteries (UPS) and generators.

"We utilize an extensive amount of complex modeling incorporating techniques such as computational fluid dynamics to get an accurate picture of the airflow inside of a cabinet," says Peter Gross, CEO of EYP Mission Critical Facilities. "We don't have the luxury of being wrong when it comes to designing a data

center for our clients. If we don't get it right before the construction begins, it puts the entire project at risk," says Gross.

Options

Building a data center is not that different from any other building project. Typical phases include design, construction, acceptance/occupancy, operations, and maintenance. While you could go to most any architectural and engineering firm for the design phase, you'll want to find out if they've ever designed a similar facility. A better route would be to go with any one of a number of companies that specializes in data center design.

A second consideration comes from how involved you plan to be

with the actual project management. Some companies choose to contract out that phase while others take more of a hands-on approach. If you do choose to be hands-on, you'll want to make sure you know what you're getting into.

Some firms offer a complete turnkey solution from design through construction and acceptance. This does give you the advantage of only a single vendor to deal with but also raises the specter of conflict of interest. Either way you'll want to speak with previous customers and have a good list of questions to probe for any issues that could save you grief along the way.

EYP Mission Critical Facilities

Designing a state-of-the-art data center calls for state-of-the-art techniques. EYP uses modeling and simulation to help customers visualize their design and do a better job at determining the requirements for critical items such as power and cooling.

Its range of expertise covers projects from small server rooms to large footprint high-end data centers. EYP engineers bring a wealth of experience and knowledge that helps customers think through all the different aspects and interdependencies of a complex project such as building a data center.

Many of the designs it has completed and is working on have

a common theme: energy conservation coupled with high density. While those two requirements may seem mutually exclusive, they can

SNAPSHOT

EYP Mission Critical Facilities

Pricing by the hour for consulting services, by the project or as a cost plus fee contract

Uses high-end design tools to help deliver the best solution to meet customer requirements; offers everything from design to installation testing and commissioning services

www.Processor.com/eypmcf

be achieved. Another focus is on high efficiency from a space and personnel utilization perspective along with a quick turnaround. EYP knows that every design must take into consideration the long-term implications of the decisions it makes, whether they are in terms of operations and maintenance or overall cost.

New technologies are helping to meet some of the critical requirements as companies look to build data centers that will not only meet their needs for today but from five to 10 years from now. Some of those new technologies address issues such as power distribution. A number of new data centers are looking at DC power as one way to approach the problem. Innovative solutions for cooling, fire and power protection, cable plant, and static switches come into play as well.

Premier Solutions

Premier Solutions brings to the table over 17 years of industry experience and multiple satisfied customers. It offers a wide variety of services from design to installation and operation.

SNAPSHOT

Premier Solutions

Pricing by the hour for consulting and by the project

Offers a wide variety of services to include both design and operations and maintenance; also has a unique service of seismic bracing for facilities in potential earthquake zones

www.Processor.com /premiersolutions6

Some of the services it provides include needs analysis, project management, network operating center design and build-out, enclosures and components, and keyboard/video/mouse installation.

One unique service it provides is for both new and existing facilities is a seismic bracing service. As a

part of this service it will secure large CPUs and storage devices, LAN furniture, and server cabinets. All of its installations are designed specifically to meet or exceed UBC Zone 4/1997 standards.

Syska Hennessy Group

While some may not like the idea of handing over an entire project from design to construction to a single company, Syska Hennessy believes that capability gives it an edge over its competition. It specializes in designing facilities for highly reliable, transaction-based, completely fault-tolerant operations. From its perspective it offers a customer a "one-stop shop" for getting a project completed.

Syska Hennessy has been around for 78 years and has 600 employees spread across its 16 operating locations. Its engineers are frequent speakers at industry conferences and contributors of articles in trade journals. Its long track record and experienced staff translate to successful projects for its customers.

SNAPSHOT

Syska Hennessy

Pricing by the hour for consulting services, by the project or as a percentage of total cost

Offers everything from the design stage through to building and acceptance; has a large geographical footprint to provide the level of onsite support without incurring additional travel costs

wwww.Processor.com/Syska

One of the ways that Syska Hennessy helps its customers determine the critical design factors is to use what it calls a critical facilities balance sheet. This allows the customer to assign a criticality level to each of 11 different areas including:

- Power
- HVAC
- Fire and Life Safety
- Security
- IT Infrastructure
- Commissioning and Testing
- Operations
- Maintenance
- Operations and Maintenance Procedures
- Controls and Monitoring
- Disaster Preparedness

One of the realities that many companies are faced with today is the fact that much of the surplus capacity of data centers built for either Y2K or during the dot-com era has been used up. All that's available now are facilities that are either unsuitable or simply inadequate to meet most needs. Syska Hennessy understands the need of its customers for increased server capacity in every cabinet. It has the experience to deliver on those requirements. ⊡

Use PROCESSOR®
To Find Product Information Fast!

Processor contains detailed information on hundreds of products geared toward the data center. We make finding the products you need easy with our color-coded sections.

Each product **Showcase** or **Manufacturer Presentation** has a color bar at the top. Simply identify the product category and related color you're looking for from the list on the right (Services, Software, End Nodes, Communications, or Physical Infrastructure) then flip through the publication to find the product section you want.

Your Guide To Products Featured In *Processor*

Services
Design, Development, Hosting, Implementation, Manufacturing, Security, Training

Software
Application Development, Business Productivity, Communications, Security, System Management

End Nodes
Components, KVM, Mobile Devices, Monitors, Peripherals, Servers, Systems

Communications
Network Security, Routers, Storage Networking, Switches, Telephony, Wireless

Physical Infrastructure
Cabling, Environmental Controls, Fire Protection, Power Distribution, Racks

SHOWCASE
SOLUTION INDEX

The Next Frontier In Security

Encryption Strategies Can Ensure Data Integrity, Even After A Breach

by David Garrett

• • •

THERE WAS A TIME when encryption was fodder for a James Bond flick, somewhere between Moneypenny and "shaken, not stirred."

Of course, that was before Web sites such as the Privacy Rights Clearinghouse could be called up with a mouse click. It tracks massive data breaches, such as last month's disclosure by the Navy that private data for 28,000 personnel was published to a public Web site. Two weeks before that, a laptop was stolen from a California professor; it contained the private data of 3,000 students, past and present, including some GPAs.

The list goes on, but all the incidents have one thing in common: They could have been harmless if

Encryption 101

What, exactly, is encryption? Simply put, it's encoding data in a way that can only be read with the help of a key.

There are quite a few encryption systems, but they largely fall into two categories, symmetric or public, based on the type of key that's used. With symmetric-key encryption, each computer that reads or writes an encrypted message must have the key. Public-key encryption is different; here, the computer that encrypts the message has its own private key but gives a public key to any computer that needs to read the message. PGP, or Pretty Good Privacy, is a common type of public-key encryption.

the data had been encrypted. Few hackers can break today's encryption algorithms, and data you can't see, as they say, is worth nothing at all.

The Pros & Cons

Why encrypt data? Because you may need to. You go to great lengths to secure your network from outside intrusion and inside malfeasance, yet once access is gained, your data can be read as quickly as a postcard.

What's more, encryption guards data that leaves your network and can save you from an egg-on-the-face disclosure. Laptops, PDAs, CDs, DVDs, and even cell phones can hold millions of customer records, tax documents, project plans, or product designs; a mere password will do little to protect that data if the device is lost in an airport or stolen from a parked car.

Email is even worse. A message you sent to a third party can be observed—and copied, printed, or saved—by any number of employees at ISPs or backbone providers

who run the Internet's major routers. Those firms take stringent measures to ensure your privacy, but are you really willing to leave the safety of your private email in their hands?

Your backups are also at risk. If you load tapes into an employee's trunk (or worse, his back seat) for transfer to a safe deposit box, a quick stop at Starbucks can become a disaster if a data thief happened to stop for a mocha. And sad to say, employees themselves are not above suspicion; some of the most famous data breaches were caused by malicious (or simply careless) staff.

Encryption, of course, can solve these problems because it masks both data at rest and data in transit. But it's not without its drawbacks. It adds a layer of complexity to your current systems, leaving one more chance for things to go wrong. And there's always the risk of lost or corrupted keys, not to mention the expense of new software, upgrades, and training. Last, end users don't always see the need for encryption and may balk at encrypting their spreadsheets or emails.

What To Use?

If you do choose to encrypt your data, you have dozens of strategies to choose from, including tools that encrypt your email, file servers, and even database systems because much of the data that identity thieves cherish resides in structured CRM apps. Encryption can also protect the transactions your customers make online.

One of the most common tools—and a marquee name in corporate encryption—is PGP, or Pretty Good Privacy. PGP is both a product and a technology; version 1.0 was released in 1991 by Phil Zimmerman, who was promptly sued by the U.S. government for export violations. (PGP rather proudly recounts this fact on its Web site because the suit not only proves the power of its technology but was later dropped. In fact, many government agencies later adopted PGP for their own use.)

Today's PGP suite is far-reaching, with the power to encrypt email; documents on laptops, desktops, servers, CDs, DVDs, and mobile drives; IM; and even FTP transmissions, all using a

single tool to manage keys. Its business products include PGP Universal, which comes in different flavors and gives enterprise-level protection to most forms of data: PGP Whole Disk Encryption, for laptops and desktops in case of loss or theft; PGP Net-Share, for servers; PGP Command Line, which lets admins automate certain types of encryption; and PGP SDK, which lets them integrate PGP into their own software.

Tools For Every Strategy

PGP is not alone, of course. There are a number of tools designed to implement a single encryption strategy, such as document encoding. GuardianEdge (www.guardianedge.com) offers the Encryption Anywhere suite that encrypts documents on nearly any corporate endpoint, including desktops, laptops, PDAs, cell phones, mobile drives, and even CDs, DVDs, and optical drives.

Scramdisk (www.scramdisk.clara.net) offers users a free form of file encryption by mounting a disk-based "container" with its own drive letter, which stores encrypted documents. The authors of Scramdisk also offer a commercial product, DriveCrypt (www.securstar.com), which is fully backward-compatible, contains a host of features you won't find in Scramdisk, and can be purchased for under $100.

Cryptainer by Cypherix (www.cypherix.co.uk) also builds encrypted, drag-and-drop "vaults" where users can store private data. Cryptainer works on most versions of Windows (there's even a version for Pocket PCs) and comes in a free version, Cryptainer LE, for basic needs.

Beyond Documents

If you're looking to encrypt your email, you're in luck: There are dozens of products to keep it from prying eyes, such as Sigaba's Secure Email solutions (www.sigaba.com). These entail both client-side and zero-client options for companies that need to establish secure email and IM channels with their customers, partners, or both. PostX offers email encryption

that needs no software on the receiving end, and other popular options can be found at Guardian Edge, Entrust, and Tumbleweed. Tumbleweed's MailGate Appliance (www.tumbleweed.com) is one of the few hardware solutions in midmarket encryption.

If you need to encrypt Web site transactions or data moving among intranets and extranets, then SSL (Secure Sockets Layer) solutions can help. Pioneered by Netscape, SSL involves the use of an SSL certificate to ensure a unique session key for each user. VeriSign, one of the largest players in the SSL space, describes a certificate as a driver's license or passport, a form of ID issued by a trusted source that guarantees the integrity of a transaction. Other companies that issue SSL certificates include Thawte and domain registrars such as Network Solutions, GoDaddy, and Dotster.

Last but not least, database encryption tools that guard your CRM, ERP, and Access systems are gaining customers with each widely publicized data breach. Forrester Research recently named Ingrian Networks, nCipher, and Protegrity leaders in the field, along with database king Oracle.

All in all, these tools add to the growing (and at times dazzling) array of encryption techniques that small and midsized enterprises can use to ensure the one thing they can never have enough of: their own privacy. ▨

Top Encryption Products

This chart compares some of the top encryption products by category.

Name	Web Site	Category	Major Features
Ingrian DataSecure Platforms	www.ingrian.com	Database and application encryption	Hardware solution that encrypts structured data, such as CRM and ERP tools
PGP (Pretty Good Privacy) Encryption Platform	www.pgp.com	All-purpose suite	Encrypts documents on laptops, desktops, and servers, as well as email, IM, and removable media
PostX Compliance And Document Delivery	www.postx.com	Email encryption	The only email encryption endorsed by the American Hospital Association; useful for HIPAA compliance
VeriSign's SSL Certificate	www.verisign.com	SSL certificates	One of the leading vendors in online encryption strategies; offers SSL, authentication, and digital IDs, among other products

Security On The Whole

will deliver the most security bang for the buck. If a broad spectrum of security technologies is brought together, they can work as a kind of technological product and strategy team to strengthen what's already in place.

Benefit Boost

A holistic approach has a number of benefits, according to experts. One major advantage is that it addresses risks from inside the enterprise as well as outside it. Reports from the FBI and U.S. Secret Service have noted that theft of proprietary information is more often the act of someone on the payroll than a hacker. This should lead SMEs to focus on both types of threats.

"If an organization has not taken steps to create and enforce sensible access control and identity management policies and practices of all its employees, an external hacker

Action Plan

According to Dennis Moreau, CTO of Configuresoft, here are some strategies to put in place for a holistic security plan.

• Establish ongoing asset discovery and risk assessment effort

• Use risk assessment to focus identification of "gaps" across staff, process, and technology capabilities

• Identify opportunities to integrate process and technology infrastructure

• Establish key performance indicators as feedback to governance and management processes

will be more successful," says Ellen Libenson, vice president of product management at Symark Software. "Adopting a security strategy other than a holistic approach means there are fewer provisions or security policies in place that would prevent that hacker from having a field day."

Security based on point solutions tends to embrace a "follower's approach" when it comes to attacks, adds Arun Chandra, CEO of iPolicy. These types of products and services are useful for the attack at hand but largely leave the problem of new variants or new exploits unaddressed. "Holistic or unified security, on the other hand, works by addressing the underlying methods of various exploits and isn't tied to any particular attack variant," he says, pointing out that the Sober worm now has at least 26 variants. A holistic approach can tame zero-day exploits without requiring major software upgrades, Chandra notes.

Better compliance is also a driving force, says Lynn Ragan, an engineer at Capital Data. The prevalence of audits and the concern over compliance issues have made holistic approaches more compelling. "Additionally, there are legal requirements which stem from internal business processes and relationships," she says. "These serve to govern such things as exact data retention and absolute deletion, plus having the ability to perform fine-grained data searches."

Compliance is also more streamlined with corporate security policies and allows for attack containment through a security update change. Because of reporting across all security functions, IT will have much better visibility and compliance reporting, no matter how many departments or offices are involved.

First Steps

In implementing a holistic approach, there are a number of elements that need to come together. According to Libenson, these include:

• Access control and identity management products that support heterogeneous IT environments and automate the processes for managing systems access, user accounts, and passwords

• Administrative password management devices or programs that generate and automatically reset passwords

• Devices, including tokens and key cards, to supplement existing access control programs to create a two-factor authentication

• Content monitoring products that scan emails and network traffic

• Intrusion detection systems and intrusion prevention systems

In addition to software and hardware implementations, Libenson also recommends that SMEs obtain copies of various guidelines that are used by security and compliance initiatives, specifically COBIT (Control Objectives for Information and Related Technology) and ISO 1799. Also, having someone in IT who is CISSP certified is helpful, or at least bring in a security consultant who has the certification.

Keep in mind, too, that each SME will be unique in its needs and approaches, adds Ragan. "It's entirely possible to spend a lot

Authentication Plays A Part

The key to any security approach, holistic or not, is authentication, says Steven Sprague of Wave Systems. The challenge is to provide strong protection for authentication credentials and also maintain ease of use. He recommends that SMEs buy PCs that have a security chip called a Trusted Platform Module, created using an established standard by trusted computing groups.
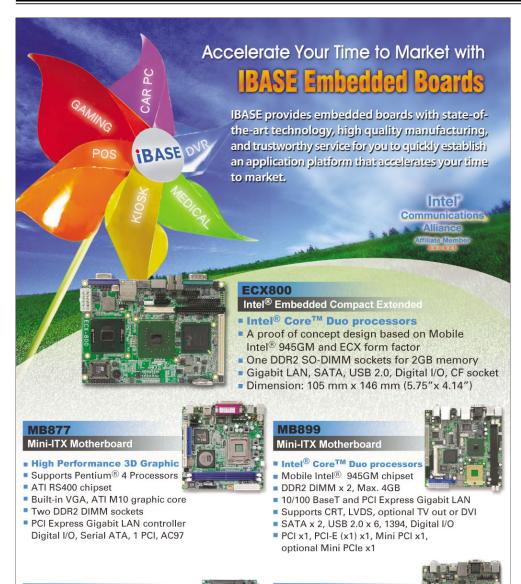
"These devices create a great foundation for multifactor authentication," Sprague says. "The foundation can be leveraged to accomplish secure data storage and strong network policy management."

of money on the wrong solution if proper analysis has not been performed," she says. "Sometimes, a simple change in procedure or internal policy may have a more dramatic effect than the newest piece of hardware off the shelf."

In general, strong first steps are usually to get some type of outside help, identify core business goals, audit each complete process, and evaluate recovery from outages.

"Stepping back from immediate Band-Aid solutions and developing a strategy will, by default, create a more holistic approach," Ragan says.

> **Because of reporting across all security functions, IT will have much better visibility and compliance reporting, no matter how many departments or offices are involved.**

Tape & Hard Disk Degaussing

Continued from Page 1

The first is a wand that can be used for hard disks and tapes, such as the Whitaker Brothers Datastroyer 102-DG Disk Erasing Wand (www.whitakerbrothers.com). The wand emits a magnetic field that removes data in one swipe and offers extra mobility for data centers. Administrators don't have to set up a degaussing station that uses precious data center space and can go to the end user to perform data swipes on a laptop, desktop, or other devices before reuse.

The second method is a bulk eraser, such as the Fujitsu Mag EraSURE (www.fujitsu .com), that removes data from hard disks and tapes in about 60 seconds per device. These powerful, large-footprint degaussers work with Type II media and hard disks up to 3.5 inches high and can be operated unattended so that administrators are able to work on other tasks. Some bulk degaussers use a belt to move disk and tape media into the unit through the magnetic field, and others have a cavity where you set the disk into the degausser for erasure.

A third method involves software degaussers, such as Ibas ExpertEraser (www.experteraser.com), that perform some of the same data-eliminating functions as a hardware degausser yet cost much less and can be configured to wipe data on many different types of media, including floppies, flash disks, hard disks, tapes, and even optical discs.

Why Degauss?

Degaussing provides a high level of security for companies that are concerned about data theft yet don't want to use disk and tape destruction methods.

"There has been an increasing focus on the poor handling of discarded computer equipment, as a number of companies and organizations have let highly sensitive information get into the wrong hands," says Jim Reinert, senior director of software and services for Ibas/Ontrack Data Recovery. "As a result, more businesses are beginning to recognize the need for effective data erasing methods and are investing in degaussers to ensure complete control over destruction of sensitive data."

The main advantage to degaussing is that the process returns data devices and tapes to a reusable and recyclable state without any of the typical concerns over security or comprising business data. There are environmental and cost benefits for most companies, as well. Yet, one critical issue is that the degaussing process is sometimes a misunderstood practice at some small and mid-sized companies. Data centers might rely on a lower-cost bulk degausser that does not penetrate the storage medium effectively. They balk at the jaw-dropping $3,000 price tag for high-end bulk degaussers. Or, untrained IT managers operate degaussing equipment incorrectly, performing the magnetic swipe for an insufficient period.

"Erasing a disk requires some skill and knowledge about whether a hard disk or tape has been properly degaussed according to the device specifications," says Ron Carboy, president of Peripheral Manufacturing, a 26-year-old company based in Denver, Colo., that specializes in data storage security products.

Part of the confusion has to do with the DoD (Department of Defense) and NSA (National Security Agency) guidelines for safe data destruction. According to Carboy, the DoD degausser approval process involves a manufacturer sending in a device for testing, suggesting the test process, and then the DoD making sure the device meets expectations. He suggests that there is no formal process for making sure a manufacturer meets a predetermined testing criterion, so data centers should examine product literature carefully to understand how data is magnetized.

That's another common misconception about degaussers, due to how hard-disk technology has changed. "In the old days, tapes and disks were coated with gamma ferric oxide, which is easy to erase and change the flux at 750 oersted [a measure of magnetic field strength]," Carboy says. "Today most tapes are made of metal particle oxide, which is hard to erase and change the flux and requires 4,000 oersted. People think they can purchase a cheap or inexpensive degausser to erase the tape or hard drives."

Warranty length is also a critical factor. Peripheral Manufacturing offers a limited lifetime warranty, compared to the more standard 12-month warranty. In the end, erasing data is a critical step in security, as long as you know the specifications, the process, and the differences in technology and methods. ▣

The Whitaker Brothers Datastroyer 102-DG is a powerful degausser that requires you to dismantle a hard disk but at a much cheaper price point than a bulk degausser.

Disk & Tape Degausser Comparison

Product	Price	URL	Features
Data Security	N/A	www.datasecurityinc.com	• Works for hard disk, Zip, and Jazz drives; floppy disks; and other media • Deguassing field is 4 inches for disk drives and 4.6 inches for tape • One-pass operation with one-minute cycle time
Fujitsu Mag EraSURE P2V	$13,500	www.fujitsu.com	• Degaussing force of 5,000 gauss • Supports hard disk drives up to 3.5 and 1.6 inches in height • Supports floppy, Zip, Rev, and Jazz media and nine tape formats
Garner Products HDTD-8300	$11,550	www.garner-products.com	• Meets compliance standards for mandates requiring complete elimination of confidential information • Works on hard drives, diskettes, and data tapes before disposal
Ibas ExpertEraser	$190, 10-erasure license	www.experteraser.com	• Works with AT/IDE and SCSI hard disks, DOS-based operation boots before BIOS • Priced per erasure to keep costs low • Complies with U.S. Department of Defense Standard 5220.22-M
Peripheral Manufacturing V91 HD/DLT Hard Drive and DLT Degausser	$3,145	www.periphman.com	• Degaussing force of 4,000 gauss • Supports 3.5- and 5.25-inch PC hard drives, DLT tapes, half-inch computer tape, and diskettes • Degausses up to 20 hard disks in bulk
Verity Systems V91HD/DLT Hard Disk Drive & DLT Tape Eraser	Pricing varies by U.S. distributor	www.veritysystems.com	• Removes data from hard disks in 20 seconds • Supports hard disks, tapes, Zip drives, and floppy disks • Tabletop design for easier degaussing
Whitaker Brothers Datastroyer 102-DG Disk Erasing Wand	$949	www.whitakerbrothers.com	• Degaussing force of more than 8,000 gauss at peak • Requires dismantling hard disks to expose media or open tape covers • No bulk operation unless you expose many drums at once

Protect The Keys To Your Data Kingdom

Archiving Your SME's Encryption & Decryption Keys

by Chris Jackson
• • •

IT HAS BECOME AN all-too-common event: Offline data falls into the wrong hands, revealing personal records and information by the bushel. The fallout travels at lightspeed, tarnishing your company's reputation (and stock price). The knee-jerk reaction is to encrypt your enterprise's at-rest data, but without a sound key management system, encryption may be providing you a false sense of security. The solution? Effective policies and systems that protect your encryption keys while providing for appropriate access.

However, encrypting your backup data adds an unavoidable layer of complexity to your backup routine. Restoring data requires access to both media and encryption key, and keeping track of multiple encryption keys can become unmanageable unless you plan carefully. Add in disaster recovery and business continuity plans, and the complexity increases. Yet failing to properly establish systems and procedures for key management can cause untold problems in the future.

Establish A Plan

The first step in successful key management is taking the time to determine your company's regulatory requirements and aligning them with the best industry practices. Whether you fall under the Health Insurance Portability and Accountability Act, the Gramm-Leach-Bliley Act, Sarbanes-Oxley, a statewide regulatory body, or other requirements, determine how your data retention/protection requirements are governed.

Next, determine your own company's policies and procedures for data protection, disaster recovery, and business continuity. These policies and procedures will naturally vary according to your budget, staff experience, and the perceived risk to your data. The policies and guidelines you develop need not be etched in stone, as changes in technology will necessitate flexibility, but you'll want to have specific and clear procedures in place.

Evaluate The Solutions

Once you've established what your requirements are and have developed an understanding of your staffing and budget capabilities, it's time to see what the vendors in the key management industry have to offer. Evaluating the myriad solutions available is not something that should be assigned to a junior staffer or someone with limited experience in data management and security. The technology and implementation details change quickly, as do the potential threats to your security.

Key management solutions typically fall into three categories: ad hoc, software-based, and vault-based. Ad hoc policies usually rely upon a variation of the fabled "sneakernet" system. In this system, encryption keys are stored on portable media (optical media, flash drive, or smart cards) and held by the parties responsible for restoring at-rest data.

Although ad hoc solutions are unavoidable for many companies, they lack several key features: redundancy, accountability, and revocability. Redundancy can be addressed by distributing keys to multiple personnel, but that impinges upon both accountability and revocability. Of the three categories, ad hoc tends to have the least amount of security as well as the most inconvenient access.

Software-based solutions usually sit atop standard server hardware and control both access to encryption keys as well as key life cycle management: key generation, expiration, and auditing. An example of a software-based solution is RSA Security's Key Manager (www.rsasecurity.com), which utilizes a SQL database for its internal key "vault" and interoperates with other encryption utilities to provide a unified encryption system. Software-based systems can be deployed with multiple sites to provide for redundancy. Another option is Finecrypt's Key Manager (www.finecrypt.net).

In a similar fashion, hardware-based solutions aim to provide the same features of software solutions but with the added benefit of hardened physical devices. Most of the hardware solutions conform to the FIPS (Federal Information Processing Standard) 140-2 Level 3 standard that determines how cryptographic modules should be devised. Two of the leading vendors for hardware solutions are NeoScale Systems and Decru.

Regardless of the system you choose, you'll want to pay special attention to how the keys are retrieved, how key access is monitored, and how the system incorporates redundancy into its design. If you need to provide key access to trusted third parties, you'll want to determine how granular you can be with granting access.

Plan For The Future

Archival data often has a perpetual lifespan that can make key management problematic. An enterprise may need to retain data indefinitely, yet retaining keys in perpetuity is unrealistic. Just as storage media changes over time, key technology changes as well. Encryption keys have gone from 3DES (Triple Data Encryption Standard) to AES (Advanced Encryption Standard). Although you can't always foresee what's on the tech horizon, you can accommodate changes as they come along.

The key to this is twofold: understanding how your encryption systems work and periodically reviewing your systems to see how they align with the latest technologies and best practices. According to NeoScale's Dore Rosenblum, "No one can plan on having a system in use for 10 to 15 years, but by choosing systems with open architectures" you can minimize the pain involved in migrating from your legacy systems. □

Neoscale's CryptoStor KeyVault is a FIPS 140-2 Level 3-compliant appliance for managing your enterprise's encryption keys.

Decru's Lifetime Key Management Appliance uses OpenKey APIs to support third-party encryption platforms.

Plan For . . .

Redundancy. If all of your eggs (keys) are in one basket, you're asking for trouble. Deploy solutions that provide for redundant storage of keys in case your data center is damaged or your primary key management system experiences a hardware failure.

Granularity. Not all staff members need full access to all of your encryption keys. Look for systems that let you grant access on a need-to-know basis.

Accountability. Robust systems track when a key has been issued and to whom it was issued. Routinely review these audit trails to ensure that keys are only being used for appropriate tasks.

Testing. If you deploy an encryption system, it only makes sense to see if you can decrypt your archival data. Concurrently, test your key management system to ensure that you understand how it functions for simple data restoration, as well as during disaster recovery scenarios. On-the-job training is not what you want to be doing during a crisis, and testing will help you iron out your procedures as well as familiarize the appropriate parties with their roles.

Product ✍ Releases

PHYSICAL

Power Protection

■ **Ultra Products** released a family of Ultra UPS models, consisting of 1025VA (615W), 1500VA (900W), and 2000VA (1,200W) units with monitoring software and a $125,000 limited warranty against any damaged equipment. The Ultra UPS line offers users the following features: boost and buck AVR (auto voltage regulation), cold start and other energy saving functions, short circuit and overload protection, a smart USB port, EMI/RFI noise filter, digitized microprocessor control, and an integrated LCD. The Ultra UPS 1025VA, 1500VA, and 2000VA are available for $119.99, $169.99, and $199.99, respectively.

COMMUNICATIONS

Network & Systems Management

■ **Anritsu** released the NetClaw Network and Service Performance Analyzer. The analyzer was designed to survey the quality of service of both fixed and mobile networks. The NetClaw analyzes information created from existing networks and tests protocol service to determine the efficiency of an enterprise's network structure. It features multilevel protocol analysis, which can capture data in a variety of mobile access protocols and core network protocols. Also featured on the NetClaw is VoIP QoS analysis, which uses a number of factors including RTT (round-trip time), jitter, and packet delay or loss to determine service quality.

· · · · ·

■ The AiroPeek and EtherPeek portable network analyzers have received software updates to add VoIP-specific diagnostics, **WildPackets** says. The analyzers now feature extra decodes, better graphing and reporting, and captures that can be limited to variable-length headers. The AiroPeek and EtherPeek now also support 64-bit Windows Server 2003 and the latest Atheros NIC chipsets.

· · · · ·

■ **Security A10 Networks** introduced an upgraded version of its IDSentrie 1000 appliance. A10 says the IDSentrie is the lowest-cost appliance on the market and protects employees' network identities, including a plethora of usernames and passwords. It meets compliance issues, allowing only a short list of employees to have access to business-critical applications. The A10 technology can allow a user to consolidate multiple usernames and passwords into one.

· · · · ·

■ **Altiris** unveiled its Endpoint Security Solution, software that gives users the ability to coordinate protecting their vulnerable systems and crucial data. The company claims traditional perimeter defenses have ceased to provide businesses with adequate protection, requiring a layered security approach. Altiris Endpoint Security Solution merges with the Altiris configuration management database and architecture to enhance business security and productivity. Not only does the software guard PCs against hackers and malware, but it also features better application integrity and a personal firewall that protects users from data theft, unauthorized port scans, and other threats. Altiris Endpoint Security Solution is available for $70 per node.

· · · · ·

■ **Foundry Networks** has introduced SecureIron PTM (Perimeter Traffic Manager) devices to improve WAN operation and security. SecureIron PTM operates at the perimeter and includes ISP link aggregation. It also offers QoS and prioritization to application traffic. SecureIron PTM provides firewall clustering and scalability and removes the need for BGP routing. The SecureIron PTM includes network-layer security, multi-Gigabit DoS and DDoS protection, application-level deep-packet inspection, stateful IP NAT, spam filtering, and URL filtering. The spam and URL filters will be available next month. The PTM itself is currently available in three models: the 100-C ($12,995), 300P-C ($24,995), and 300P ($24,995).

· · · · ·

■ **Portwell** announced the Kilin-6030 and Kilin-6020, Internet Security Appliances based on the MIPS64 technology from Cavium. The Kilin-6030 and Kilin-6020 use the Cavium Octeon-3800 family Network Services Processors to address

Organize, Protect Your Cables

Rittal's New ManageIT Provides Tool-less Solution

by Daniel P. Dern

· · ·

EXCESSIVE BENDS in the cables going to gear in your server or network racks can degrade application traffic. But as IT brings in boxes with greater cable densities, installing cables properly can be harder.

To make it easier for IT staff to guide and secure cables in the company's TS8 line of server and network rack enclosures, Rittal has announced its ManageIT cable management add-ons for use with the company's racks.

According to Jim Whitmore, product manager for datacomm at Rittal, "ManageIT alleviates network problems caused by loose connections and cable damage. It also provides integral retention of cable bundles, protecting them from damage due to twisting, stretching, nicks, or sharp bends that could affect signal quality and network performance. It also allows simple changes and additions, resulting in man-hour and cost reductions."

ManageIT provides pass-through ports for front/rear cable routing and, according to Whitmore, accommodates a variety of tool-less accessories including quarter-turn D-ring, cable slack spool, and a Velcro quarter-turn hook and loop manager. Also, says Whitmore, ManageIT's "fingers" line up with the Us and rails, keeping cable bend radii compliant with ANSI/TIA/EIA standards to protect cables from tears or stretching and providing added support for copper and fiber data cables.

Rittal's ManageIT cable manager system, says Whitmore, "lets us manage cables in a smaller area, vs. needing a deeper or wider cabinet." The Rittal cable manager can accommodate up to 1,200 cables in a rack, according to Whitmore, depending on the cable diameters.

Companies who would have use for this kind of cable management, according to Whitmore, would include "any company with any kind of data infrastructure, such as medium- to high-density applications, like servers or VoIP, using CAT5 or fiber cabling."

ManageIT is available in modular 9U sections, for 24-, 28-, and 32-inch widths, in both horizontal and vertical configurations, and is also available in a 19-inch x 2U horizontal manager for controlling cables and patch cords entering the patch panel and feeding to switches. Pricing starts at $60 per module (before volume pricing).

According to Whitmore, any EIA 310D standard cable rack-mount manager can be used with a Rittal rack and would most likely be simple patch panels with "D-rings." By contrast, "Our system has been designed so we're not taking up any space in the cabinet." Other available server cabinets include APC's InfraStruXure (www.apc.com), Chatsworth's Tera-Frame Cabinet System with CPI Cable Pathway (www.chatsworth.com), Liebert Foundation and Foundation EX enclosures (www.liebert.com), and Wright-Line Vantage and Paramount enclosures (www.wrightline.com).

Panduit (www.panduit.com) recently announced its NetRunner Vertical Cable Manager for similar cable management. ▣

SnapShot

Rittal ManageIT Cable Management System

$60 per module (before volume pricing)

Provides simpler, safer management of more cables in Rittal server cabinets

www.Processor.com/Rittal2

Keep Tabs On Encryption Keys

Decru Unveils Third-Generation LKM Appliance

by Tony Bradley

· · ·

TO PROTECT DATA on laptops and other mobile storage devices, many companies are looking at encryption solutions. By encrypting confidential or sensitive data, or even the entire hard drive, companies can be confident that data integrity will not be compromised even if the device is lost or stolen.

Michelle Borovac, director of marketing for Decru, a NetApp Company, says, "As encryption becomes more broadly deployed, the bigger challenge becomes managing, archiving, and tracking the keys used to encrypt the data. These keys will need to be kept for the lifetime of the data, so it is important to have a way to manage keys securely and easily."

Decru is no stranger to security and key management. It has been providing its LKM (Lifetime Key Management) solution since 2003 and offers one of the most mature and most advanced solutions available. Its latest version, the LKM 3.0 Appliance, will be in an appliance form rather than just software, allowing greater flexibility for enterprises. Version 3.0 is projected to be available in Q3.

Borovac says, "Using dedicated hardware to manage encryption keys allows for much greater scalability than if key management was handled in software. Further, it provides a secure environment for 'key translation'—a critical feature for information-sharing applications. Customers can use a single LKM Appliance to store and manage keys from 100-plus encryption systems and can be clustered for availability."

Decru faces competition from companies such as NeoScale Systems (www.neoscale.com) with its CryptoStor KeyVault appliance and MaXXan Systems (www.maxxan.com) with the MaXXan CipherMax appliance. The CryptoStor KeyVault in particular offers very similar capabilities, including meeting FIPS 140-2 Level 3 requirements and providing role-based access.

The Decru LKM appliance provides centralized management, making administration of multiple appliances across an enterprise simple and efficient. One LKM appliance is capable of securely storing more than 10 million encryption keys. Redundant hard drives and key replication ensure continued availability, and up to 16 LKM appliances can be clustered together.

One of the best features of the Decru LKM 3.0, however, is its open API. Decru's OpenKey partner program and the API allow the functionality of the appliance to be extended across a heterogeneous environment. ▣

SnapShot

Decru Lifetime Key Management 3.0 Appliance

LKM solution in an appliance form rather than just software, allowing greater flexibility for enterprises

www.Processor.com/Decru

Product Releases

wire speed performance in small packets required by security appliances, such as firewall, VPN, antivirus, and intrusion prevention. Kilin family products allow up to 16 MIPS64 cores and optimized packet arbitration mechanisms. Kilin products have real-time processing and security accelerators to help create quality voice connections. Portwell embeds an x86 module into Kilin-6030 and Kilin-6020 to help the transfer to network-centric architecture.

· · · · ·

■ **WIN Enterprises'** scalable PL-01027 network appliance is suitable for NAS or security duty. The latter could take the form of a firewall, a policy gateway, a content filter, or other applications. The 1U appliance uses a 400MHz to 1.5GHz VIA C7/Eden processor and offers four 100MBps LAN ports, a CompactFlash Type II socket, a mini PCI slot, and a USB 2.0 port. It's pitched toward SMEs and is RoHS compliant.

Telephony

■ **Cantata Technology** has added VoIP capabilities to its Excel MSP (Multi-Services Platform) 1010 for IP applications. MSP 1010 supports both wired and wireless networks. It has a small footprint, is scalable, and operates as either a service node or a service switching point. The VoIP module supports as many as 1,024 channels of wireless or wired codecs and a DS3 interface.

· · · · ·

■ **Quintum Technologies** released a new call routing server. The redesigned Tenor Call Routing Server (CRSII) lets businesses take advantage of call routing on a smaller scale and at a lower cost. The CRSII routes calls in real time and supports several parameters, such as QoS-based routing, source-base routing, best pattern match, and circuit routing. The CRSII supports up to 72,000 BHCA (Busy Hour Call Attempts) and can provide network call routing statistics. (It can base the statistics on real-time or historical data.) It can disallow endpoints to prevent unauthorized network resource access. The CRSII starts at $8,000.

· · · · ·

■ **SpectraLink** released an enhanced wireless telephone. The Link 6020 Wireless Telephone supports SpectraLink's Link WTS (Link Wireless Telephone System) and is targeting the handset and the healthcare, retail, and manufacturing industries. The handset now offers speakerphone capability and supports the IP 53 water and dust resistance standard. It also has a larger display screen and lithium-ion battery packs that provide up to eight hours of talk time. The Link 6020 is available for $695.

END NODES

Server

■ **Bull** released the NovaScale R600 and NovaScale T800 series of open servers, which feature Intel Xeon processors. Bull also released the NovaScale Universal line that can be used for services such as front-office and database servers. The NovaScale R600 series is made up of fault-tolerant servers in "rack" format to aid applications in Windows 2003. An example of the NovaScale R600 series is the R620 that includes up to two Intel Xeon 3.8GHz processors and 12GB of DDR2 SDRAM. The NovaScale T800 series uses the "tower" format servers for workgroups under Windows or Linux. The NovaScale T840 has up to two dual-core Intel Xeon 5000 processors, L2 cache memory of 2 x 2MB, Dual Port Gigabit Ethernet controller, and a fixed or hot-swap redundant power supply.

Bull also announced the NovaScale 3005 range of open servers based on Intel Itanium 2 "Montecito" processors. The NovaScale 3005 servers run applications under Windows and Linux and complement the NovaScale 5000 series servers. The NovaScale 3025 server features a range of one or two dual-core processors and eight integrated disk bays. The NovaScale 3045 server can use between one and four dual-core processors and eight integrated disk bays. A NovaScale 3045 Compact server allows the construction of large clusters to deliver optimum processing power. The 3045 Compact can utilize between one and four dual-core processors and two integrated disk bays in an ultra-compact format.

· · · · ·

■ **Supermicro** has announced 1U servers with dual power supplies with an efficiency rating of over 85%. The 6015P series of servers include redundant 700W power supplies to reduce SPOF errors. The 6015P series includes the SuperServer 6015P-TR and the 6015P-8R. Both servers include the Intel Dual Core Xeon 5100- or 5000-series

Keep An Eye On Your UPS

MGE Offers Monitoring Service To Keep Tabs On UPS' Health

by Kurt Marko
· · ·

IT INFRASTRUCTURE is an indispensable asset for most businesses, so system disruptions are no longer temporary nuisances—they can have life-and-death consequences and inflict significant financial damage. Ask any IT manager operating in the path of Hurricane Katrina the importance of disaster preparedness, and you're likely to get an earful.

A critical element of most IT uptime strategies is a reliable source of power, ensured by a UPS (uninterruptible power supply) and possibly backup generator. While a UPS can ensure system operation in the event of short-term power disruptions, it's still just a piece of hardware, subject to its own set of problems. What happens if the UPS fails at the wrong time, right before the thunderstorm that knocks your computer room off the grid? A dead UPS, like the proverbial sleeping night watchman, provides only a false sense of security.

Major UPS vendors realize that a component so critical to system reliability and availability needs close monitoring and proactive maintenance. In line with this, MGE, one of the largest suppliers of UPSes, released its RPM (RemotePowerMonitoring) service to ensure problems are caught and corrected before disaster strikes.

The RPM service ties MGE's UPSes to its Customer Care Center via modem and records all critical parameters including

Product ◢ Releases

processor (with up to 1,333MHz FSB). In addition, the 6015P-TR accommodates four 3Gbps SATA drives, and the 6015P-8R supports four dual-channel U320 SCSI drives.

Storage

■ The FastStream NDMP 4600 from **ATTO Technology** is the first NDMP backup device of its kind, according to ATTO. It reduces LAN traffic by adding Ethernet connectivity to SCSI tape drives and offloads a tape server's workload from the NDMP filers. The FastStream NDMP 4600 has separate data and control paths to let it perform at maximum capacity and move the tape backup process off NAS filers. Users can configure the product with ATTO's Web-based GUI, Express NAVTM. With its 1U height, the FastStream NDMP 4600 easily integrates into rackmount systems and attaches to existing SCSI tape libraries.

· · · · ·

■ **Sans Digital** released a new eSATA 5-bay storage tower. The MobileRAID MR5CT1 offers SATA to Firewire 800, USB 2.0, and eSATA triple host interfaces, as well as a built-in, OS-independent RAID controller. The embedded RAID manager allows configuration via LCD, RS232, or 10/100 Ethernet. It has temperature and fan failure LEDs and supports up to 3.75TB of storage via SATA II, NCQ, 3Gbps 750GB hard drives. It has a 400MHz Intel I/O processor and has a backplane-based design. The MobileRAID MR5CT1 starts at $1,745.

· · · · ·

■ The V660 HDD Evo degausser from **Verity** comes with an infrared remote control that is effective from up to 15 meters away. The Evo can totally wipe (as well as permanently disable) a hard drive in five seconds, the company says. It can even be set to only erase drives via the remote control, eliminating the possibility of unauthorized walk-up degaussing.

· · · · ·

■ **Winchester Systems** announced the release of a RAID 6-capable SAS array with "extremely high performance." The new FlashDisk SF-2300 supports up to 12 15,000rpm hard drives in a 2U chassis and provides up to 780MBps reads and 536MBps writes in RAID 5. Prices start at under $15,000.

Components

■ **Advantech's eAutomation Group** introduced the AIMB-762 industrial dual-core ATX motherboard. The AIMB-762 supports LGA775 socket Intel dual-core Pentium D, Pentium 4, and Celeron D processors. It is built on the Intel 945G chipset and supports speeds of over 3.8GHz with a front-side bus up to 533/800MHz. It has one PCI-Express x16, one PCI-Express x4 interface, and five 32-bit 33MHz PCI slots. It also has dual PCI-Express x1 Gigabit Ethernet ports.

· · · · ·

■ **Protech** released four motherboards (the PSB-502LF, EB-381LF, EB-561LF, and EB-561LF). The PSB-502LF comes with an Intel Pentium M or Celeron M processor (each running up to 2GHz) and is based on Intel's 855GME chipset that includes an integrated Intel Extreme Graphics 2 for 3D graphics. It includes a 400MHz FSB, two Gigabit Ethernet ports, and two USB 2.0 ports. The PSB-502LF is compatible with versions of Windows and Linux.

The EB-381LF uses VIA's Mark Core-Fusion CPU, which runs at a clock speed of 533MHz. The system includes an FSB speed of 133MHz and can support up to 512MB of PC100 or PC133 SODIMM memory. The EB-381LF includes an IDE Type II CompactFlash slot to protect data from high vibration. In sag environments, a 44-pin connector is available for 2.5-inch hard drives. The system includes an onboard VIA 8606 integrated graphics engine that's compatible with a wide variety of displays including CRTs, TTLs, and LVDS displays. Output ports include two USB 1.1 ports, one RS-232/422/485 port for 16550-compatible devices and one additional RS-232 port, a parallel port, an infrared port, and a 10/100 Ethernet port. An AC '97 VIA VT1612A provides audio support for line-in, line-out, and MIC jacks.

The EB-561LF pairs a Low Voltage Intel Pentium M or Ultra Low Voltage Intel Celeron M with an Intel 855GME on the northbridge and ICH4 on the southbridge. An Intel 852GM chip provides integrated graphics and supports CRTs or 18- and 32-bit LVDS and TV-out displays. The system includes a 400MHz FSB and can support as much as 1GB of DDR266MHz SDRAM. A PC/104-Plus expansion port provides

communication faults, battery levels, battery discharge, battery end-of-life, load-on-bypass, alarm conditions, inverter-on-battery, and internal microprocessor condition. When technicians detect a fault, they can dispatch one of MGE's field engineers via fax, email, or pager for further investigation. In the event of a critical hardware failure, their operators dispatch a repair technician to perform onsite diagnostics and repair. A "watchdog" feature monitors the telephone line to guarantee that any communication breach between the UPS and MGE's operations center is identified and corrected.

RPM also combines data, including any anomalies, alarms, and interrogation data into a standard report. These reports are used to provide both baseline performance benchmarks and to suggest any preventive or corrective maintenance.

Most of MGE's major competitors in the enterprise, industrial, and medical UPS market have support organizations that have instituted some form of remote monitoring service. Liebert's Global Services division (www.liebert.com) offers what it calls Adaptive Monitoring providing a similar range of real-time data, trend, and forensic analysis and system health monitoring. Eaton Powerware (www.powerware.com) has a Remote Monitoring and Diagnostics Service that scans more than 100 UPS and battery

operating data points, recording trends, summaries of top 10 system parameters, and monthly reports. Chloride Power Protection (www.chloridepower.com) offers the LIFE 24x7 surveillance service, while APC (www.apc.com) sells a Remote Monitoring Service based on its InfraStruXure Manager software.

Reliable, uninterrupted power is a fundamental requirement for all critical IT systems. Ensuring that your UPS is available when you need it is as important as deploying one in the first place. Whether you monitor them yourself using available SNMP-based software products or contract with one of the vendor's remote monitoring services, there is no excuse for not keeping tabs on your UPS' health. ▮

SNAPSHOT

MGE UPS RemotePowerMonitoring Service

Monitoring fees free for first year and $700 for each subsequent year (hardware, installation, and configuration priced separately)

Continuous monitoring service for MGE's large, three-phase UPSes that provides real-time notification of equipment status and any anomalies to technicians at MGE's customer care center

www.Processor.com/RPM

Product ⟍ Releases

expansion opportunities for LAN, video, or other expansion cards. Ports include an RS-232/422/485 port and a single RS-232 port, a parallel port, two USB 2.0 ports, and a 10/100 Ethernet port. A 44-pin IDE connector provides support for additional storage.

Lastly, the PMB-562LF, a compact, embedded motherboard for Low-Voltage Pentium M processors and Celeron M processors, uses Intel's 855GME on the northbridge and an Intel ICH4 on the southbridge. It supports a 400MHz FSB and an Intel Extreme Graphics 2 integrated video processor that supports CRTs, 18- and 36-bit LVDS, and LCDs. Ports include four USB 2.0 ports, one RS-232/422/485 port, three RS-232 ports, a parallel port, an infrared port, and two 10/100 Ethernet ports.

SOFTWARE

Business Productivity

■ **AdventNet** announced multilanguage support for ServiceDesk Plus, a help desk and IT asset management software that helps organizations streamline their IT help desk functions. New language support includes Chinese, French, German, Japanese, Portuguese, Spanish, and Swedish. Service-Desk Plus is Web-based management software that can integrate with request management, asset tracking, purchasing, contract management, self-service portal, and knowledge base functions.

Messaging & Groupware

■ **NetSimplicity** unveiled the MRM (Meeting Room Manager) On Demand, a hosted room scheduling software. MRM On Demand allows users to view room schedules and book meetings from any standard Web browser, Outlook calendar, or interactive LCD panel. Administrators can control booking rights, automate room requests, and manage resource deployment. The software is available in Basic, Pro, and Enterprise editions and resides on NetSimplicity's third-party hosting servers. MRM On Demand pricing begins at $19.99 a month with an annual or month-to-month contract.

Network & Systems Management

■ **Avocent** introduced additional features for its DSView 3 management software to offer management tools for third-party power devices. Owners of Server Technology's Sentry Switched CDU products can use Avocent's software to remotely manage serial devices, servers, and power via a single interface. The DSView 3 improvements also feature out-of-band power management for storage devices and servers with IPMI (Intelligent Platform Management Interface). DSView 3 securely proxies IPMI data from UDP to a TCP data stream. With the upgrades, users can access Microsoft Terminal Services using VNC (Virtual Network Computing) or RDP (Remote Desktop Protocol).

Security

■ **AirDefense,** a provider of anywhere, anytime wireless security and monitoring, announced that it will now protect enterprises from rogue wireless devices based on the draft IEEE 802.11n standard. The protection comes in the form of the AirDefense Enterprise 7.0, a next-generation wireless security platform.

· · · · ·

■ **Anfibia Software** announced Desktop Orbiter 4.1.3, with fixes for bugs and other improvements. New features with version 4.1.3 include desktop protection, Web and program filtering, reporting and exporting tools, and a detailed usage log. Desktop Orbiter allows administrators to secure multiple workstations at once, monitor network activity, filter software usage, filter Web sites, and automate repetitive tasks.

· · · · ·

■ **ElcomSoft** released the Proactive System Password Recovery version 4.8, which lets Windows users recover lost passwords for Windows 95/98/Me/NT4/2000/XP, .NET Passport passwords, SYSKEY startup passwords, passwords stored in Domain Cached

---

Don't Forget The Infrastructure

New CPI Package Provides Remote Monitoring & Management

by Cynthia Lazzaro
· · ·

MAINTAINING A NETWORK infrastructure is more than just monitoring the physical network for intruder detection or managing server patches and updates or rolling out applications. In fact, a significant component of any network is the server room or data center itself, and that too needs to be monitored and maintained. To help network administrators maintain the integrity of this often-overlooked asset, CPI (Chatsworth Products Inc.) introduced its new RIM-600 (Remote Infrastructure Management) product package.

This new set of products gives network administrators the ability to remotely monitor, record, and analyze environmental conditions in large data centers, yet because of its modular nature, the RIM-600 is cost-effective enough for smaller equipment or server rooms. The complete RIM-600 package is made up of one required module, a series of up to eight remote sensors, and two optional modules. The main module is the Host Module, which is required to monitor the first set of sensors, and the Node Module and PowerGate Module are available as add-on enhancements.

The eight available sensors monitor almost everything in your data center, including room and cabinet temperature, presence of water, humidity, smoke, power, and motion. There is also an optional network camera. The sensors are monitored by the Host Module, which is 1U in size and can be rack mounted. It monitors up to eight sensors and 64 IP addresses on the network and can be configured to contact up to 64 users by SNMP (Simple Network Management Protocol), email, phone, fax, or pager when a problem is identified.

The Node Module is an add-on component that provides monitoring for an additional set of eight sensors and 64 more IP addresses. The Node Module connects to the network as a rack-mounted device and is monitored by the Host Module. Each Host Module can control up to 31 Node Modules for monitoring a total of 256 environmental sensors and 2,048 IP addresses and ports anywhere in the network.

The PowerGate Module is designed to monitor and control power to eight power outlets, permitting remote power cycling on an individual outlet if a piece of equipment hangs. Each Host or Node Module supports a single PowerGate Module.

American Power Conversion (www.apc.com) has a competitive product called NetBotz Environmental, which is a network-based appliance that can detect and report on harmful changes to the physical infrastructure. Like the RIM-600, NetBotz is scalable from small server and equipment rooms to large data centers. The modular design allows integrators to pick and choose the required sensors and also allows for the integration of third-party sensors. Another competitor on a smaller scale is NTI's (Network Technologies Inc.; www.nti1.com) ENVIRO-MUX Mini Server Environment Monitoring System, which provides SNMP and Web monitoring and management of server room environments. The product provides early warnings for temperature and humidity problems but can also detect water problems before damage is irreparable. Although not designed for larger data centers, the Mini Server Environment Monitoring System competes with the barebones version of the RIM-600 for monitoring of the major server room components. ⏹

NonStop Server Passes The Test

New HP Server Offers Five Nines Reliability For The Enterprise

by Joe Lazzaro
· · ·

FOR MANAGERS of networks and data centers, keeping systems running is job one. This requires equipment that can stand the "five nines" test. But even 99.999% reliability means that a given system could be out of commission for about five minutes per year. To keep critical business processes going, organizations are turning to fault-tolerant systems and servers. Traditionally, fault-tolerant systems come with a hefty price, but these mission-critical systems are becoming more cost effective.

Adding to its line of NonStop servers, HP announced the entry-level NS1000. According to HP, "the NonStop software suite offers software fault tolerance, fault isolation, dynamic workload balancing, linear scalability, application virtualization, and cluster programming transparency."

Based on Intel's Itanium 2 processor, the HP NS1000 server features a clock speed of 1.3GHz. The server supports from two to eight processors, 4 to 8GB RAM, and 1.3GHz/3MB cache. Up to 32TB of internal disk storage can be installed per server. The NS1000 also supports Integrity NonStop products, such as HP NonStop SQL/MX, HP OpenView, internal Fibre Channel disks, and HP StorageWorks XP SAN. Mindful of future upgrade paths from Intel, the server enables purchasers to take advantage of upgrades to the Itanium 2 processor family as improvements become available.

The NS1000 is the entry-level product for HP's family of Non-Stop Value Architecture servers. According to the company, the NS1000 offers fault tolerance and availability similar to the HP Non-Stop S-series server. The NS1000 also employs the HP ServerNet fabric and the same modular I/O as HP's high-end Integrity NonStop NS16000 and NS14000. One of the HP NS1000 server's competitors is IBM's new System z9 Business Class server (www.ibm.com), which has similar performance.

According to Craig Wagner, director of marketing and solutions, HP's NonStop Enterprise Division, "HP has cornered a unique market with the Integrity NonStop NS1000. It is the first and only server in the marketplace boasting five nines of application availability at the price a customer would pay for a clustered Unix system." The U.S. list price for the NS1000 server with the entire operating stack of hardware, operating system, middleware, and database averages $85,000 per processor. ⏹

Product Releases

Credentials, some WEP and WPA-PSK encryption keys, screen saver passwords, and VPN passwords. Other capabilities include decrypting and viewing password history hashes. The latest version now lets customers recover even more passwords, including those in Microsoft Internet Information Services. A noncommercial license is available for $60, and a business license is available for $120.

ElcomSoft also announced the latest version of its Advanced Outlook Password Recovery software, designed to help Outlook users recover protected Personal Storage Files. Version 1.34 is compatible with Outlook 97/98/2000/XP/2003, including the beta version of Outlook 2007. Users interested in the Advanced Outlook Password Recovery software can acquire a noncommercial license for $30 or a business license for $60. Additionally, ElcomSoft launched its Advanced Instant Messengers Password Recovery 3.2, which helps recover the passwords to more than 50 popular instant messaging applications, including ICQ, ICQLite, AOL Instant Messenger, AIM Triton, Yahoo! Messenger, Excite Messenger, MSN Messenger, Microsoft Office Communicator 2005, and Google Talk. The updated version adds password recovery support for Windows Live Messenger, MySpaceIM, and Exodus. You can purchase a personal license for $30 or a business license for $60.

. . . . .

■ **Senforce Technologies** announced the ESS (Endpoint Security Suite) v3.2. The suite already came with wireless security, centralized management and reporting capabilities, advanced firewall, and endpoint integrity. The latest version now features the addition of USB and removable storage security, thus giving IT departments a more robust security product and an easier way to monitor and enforce security policies on laptops, desktops, or tablet PCs. Version 3.2 still features the company's Location-Aware technology that automatically enforces the appropriate security policy based on laptop location, but ESS v3.2 now also offers support for Active Directory, eDirectory, and LDAP (lightweight directory access protocol) directories, which can apply policies to one individual, a group, or an entire company.

SERVICES

Network & Systems Management

■ **Dell** introduced its Platinum Plus service to support customers who purchase Dell-branded servers and storage systems. Businesses and nonprofit institutions taking part in the Platinum Plus program can now monitor productivity with Operations Performance Benchmarking and utilize the Enterprise Command Center for real-time tracking. Other features of the service include hardware, software, and Enterprise Expert Center support seven days a week and 24 hours a day. Platinum Plus customers also have access to emergency services for critical server and storage system issues.

Security

■ **McAfee** announced that it will offer online virus scanning for the Symbian Signed mobile application certification program. Symbian Signed provides authentication for third-party applications and now also includes virus scanning. McAfee will provide virus scanning before the content proceeds to the certification stage of the Symbian Signed service.

OPINIONS
INFO-TECH • INSIGHT

Itanium Won't Cure Heart Disease

Itanium is the oat bran of computer processors. Like oat bran, it was once hailed as the one big thing that was going to save your life. Now it is being repositioned as a very good thing in limited doses. You were expecting more? Don't be misled by "media hype."

HP executives are sick and tired of being asked about the Itanium's future. I know this because I've seen the reaction several times. There is a roll of the eyes, an exasperated sigh, and something along the lines of the following response.

"Look. It's simple," they say with mild annoyance. "The Itanium is the best platform for high-end, business-critical systems. It competes with the likes of IBM's POWER and Sun's SPARC processors and is the successor to high-end RISC processors such as the MIPs, Alpha, and HP's PA-RISC. That is what Itanium was meant to be. That is what it is. It's not going anywhere."

As thus defined, HP is behind the Itanium. It is part of a $10 billion alliance commitment to Itanium development and is moving its high-end server business exclusively to Itanium-running Integrity servers while phasing out the PA-RISC.

So why do people keep questioning Itanium's future? It's because HP and Intel have changed their story. Wasn't Itanium supposed to be the next big thing?

Oat Bran: Eat It Or Die!

In the 1980s there were some research studies that suggested that oat bran consumption could significantly reduce blood cholesterol and cut the risk of heart disease. The breakfast cereal industry was all over the miraculous benefits of oat bran. The message: Oat bran will save your life! Eat this cereal or die!

But just as people were trying to figure out how to get oat bran into steak and JELL-O, some new studies downgraded the stuff from "miraculous" to just "good." The breakfast cereal industry had some repositioning to do.

A common tactic was to blame the "media" for all the oat bran hype. One television commercial featured an actor reading a newspaper. In the commercial, he shakes his head ruefully and addresses the camera: "You know, you just can't believe

JOHN SLOAN

John Sloan is a senior research analyst at Info-Tech Research Group. He has more than 15 years of experience as a technology writer, as well as experience in corporate communication, Web site development, and electronic publishing. His research interests include electronic publishing and communications (including e-learning), disaster recovery planning, desktop computing, and Web application development platforms. Sloan holds a master's degree in journalism from The University of Western Ontario.

everything you read in the papers these days."

Personally, I saw a lot more oat bran hype printed on cereal boxes than I ever did in my morning daily. I'm seeing the same kind of hype, reality check, repositioning, and finger pointing going on with Itanium.

Dietary Alternatives To Itanium

In the '90s we witnessed the evolution of Intel x86 technology from the desktop to the server room. Propelled by a Moore's Law doubling of processing

> ## Wasn't Itanium supposed to be the next big thing?

power every two years or so, there was a steady parade of more powerful processors from Intel. The fastest of these processors powered servers.

But x86 had some structural limits. It was not a 64-bit chip and was limited in how much memory it could address. Soon infrastructures would need to step up in order to grow up. The future was 64-bit. The future was Itanium. By the middle of this decade, Itanium would be everywhere.

A funny thing happened on the way to the 64-bit future. First, Itanium was late to market and "underwhelmed" many in its first incarnation. Then 64-bit processor extensions for the x86 appeared in AMD's Opteron and then in Intel's own Xeon. The extensions, and other enhancements such as multiple cores, meant there was a future in the old x86 after all.

These events didn't make Itanium a bad thing. Like oat bran, it still had its benefits. But consumers can now choose the whole-grain goodness of enhanced x86 processors or the high-fiber strength of the IBM Power or the Sun SPARC. Why should they go with Itanium?

Leave Poor Itanium Alone?

Intel and HP have done some repositioning, focusing the Itanium on the narrower niche of high-end, predominantly Unix, critical systems. While talking up the benefits of the Itanium, such as the processor's ability to address huge amounts of memory, they decry negative media and analyst pundits for questioning the chip's future.

There is a real sense among supporters of Itanium that the chip is the victim of bad press. The message to technology analysts is, "Itanium isn't dead, so stop saying it is."

But the repositioning of Itanium has led to a slew of legitimate questions among potential customers. Why do we need to move off PA-RISC? Why do we need to move to Itanium? If this processor isn't the next big thing, does it have any future at all? IBM, Sun, and Dell don't seem to think so.

Itanium is simply not the processor it was going to be. ▣

Send your comments to infotech@processor.com

OPINIONS
RESELLER • NEWS & VIEWS

An Open Invitation To OEMs

Computer resellers and the manufacturers of new equipment need to work together to solve a serious problem that is facing the technology industry, and they need to do it now! It is hurting owners of IT equipment, OEMs, and secondary market resellers.

Is It Real, Or Is It . . .

All OEMs these days order the parts that go into their equipment from various component manufacturers from around the world. In order to negotiate the best possible prices, the OEMs order more components than they actually need. The excess product, or over-runs, find their way into the IT marketplace.

Take memory cards, for example. Several component manufacturers make memory cards for most of the major OEMs. The OEMs take what they need, and the component manufacturers "dump" the rest on the open market. Sometimes the parts are dumped with the OEMs logo on it, and sometimes they are un-marked, but not for long.

Enter The Crooks

The fact that no logo is on some of this memory doesn't slow down "the bad guys." Today, it is pretty easy to buy machines that will reproduce logos, part numbers, and even serial numbers that look amazingly like those of the manufacturer. With the push of a button, an unmarked memory card can be made to look just like an OEM card. These counterfeiters do such a good job that at times the OEM's brand protection "police" have a hard time telling the real from the fake with the naked eye. It sometimes takes their engineering departments to do the forensic work.

Just like many other crimes, these illegal goods need to be laundered. Most of the time, the counterfeiters sell their goods to unwitting secondary market resellers. And I am sorry to say that sometimes they sell it to secondary market resellers who know exactly what they are buying. (By the way, members of the Association of Service and Computer Dealers International [www.ascdi.com] and members of the North American Association of Telecommunications Dealers [www.natd.com] are subject to expulsion from these trade organizations for knowingly engaging in such an activity.) But, knowingly or not, these fake products end up installed at an end user.

It Costs Us All

No matter how they get to the end users, everyone pays for this crime. First it hurts the OEMs that find these fraudulent parts inside the equipment under their maintenance pay. Sometimes these parts are "rejects" and not up to the specifications of the authentic parts, which causes all kinds of problems. And because they are mislabeled, it takes the poor field engineer forever to diagnose the failures. Most of the time, the field engineers (who really can't tell if the part is real or not) replace it with a new part. Even if they can tell that a part is fraudulent, it is usually easier not to confront the end user with those facts and just replace the part with an authentic OEM part. The repair ends up being a 100% loss for the OEM.

The reseller market dealer is hurt, too. The more fraudulent equipment that becomes available on the market, the farther down it drives the price of authentic OEM parts and equipment. Most secondary market resellers buy and inventory equipment at wholesale market prices. After they inventory a product, if a flood of phonies enters the market, the value of their inventory declines.

Leasing companies and end users are hurt, as well. When an end user is finished using a machine or when a lease term on a product is over, both try to sell their equipment for as much as possible. The flood of phony parts on the market renders their used and off-lease equipment worth a lot less than it should be.

An Invitation To Get Together

Ethical secondary market resellers and the manufacturers have something in common. The manufacturers don't want the fraudulent product on the market, and the ethical resellers don't want to be the unknowing "fences" for these crooks. Resellers don't have the information or resources they need to tell the real from the fake, but the manufacturers do.

Manufacturers can identify fraudulent parts a number of ways. Serial numbers can tip them off as to what is real and what isn't. Many times the logo or part number is not perfect and can be identified as counterfeit. OEMs can sometimes tell by examining a part where and when it was made. But only the manufacturer knows for sure.

It is time for the manufacturers to work with the secondary market to rid our industry of this problem. And, by the way, this is not unprecedented. Since the days of the IBM typewriter, manufacturers, industry trade organizations, and the authorities have worked together to nab thieves who have stolen all types of hardware and tried to fence it to the equipment dealers.

By working together, the secondary market dealers, armed with the knowledge to identify the fraudulent products, can turn the bad guys over to the proper authorities.

To that end, I call upon the major industry associations and the major OEMs to put together a plan to rid our industry of this blight.

Send your comments to ascdi@processor.com

JOSEPH MARION

AUTHOR

For the past 30 years Joseph Marion has worked in the technology equipment reseller market. In the 1970s he competed with the major equipment manufacturers by selling, leasing, exporting, and maintaining used equipment. In the 1980s he "crossed over," joining forces with IBM and becoming one of its most successful authorized business partners. Since 1990 Marion has headed up the Association of Service and Computer Dealers International, the world's largest association of companies that deal in technology products.

The Sun Sets For Windows 98

It May Be Time To Move On & Upgrade

by Bill Hayes

• • •

WITH THE PASSING OF official support for the last of the Windows 9x vintage operating systems, some security companies have announced that they too will eventually no longer support these obsolete systems.

According to a Microsoft spokesperson, on June 30 Microsoft officially closed support for Windows 98, Windows 98 Second Edition, and Windows Me and their supporting versions of Internet Explorer 6.0 and Windows Media Player.

The spokesperson says that Microsoft will not offer any form of premium support, incident support, or security updates. However, Microsoft will continue to offer online support through its Select A Product Solution Center at support.microsoft.com/select.

Microsoft effectively began dropping support for these operating systems on June 6 when it announced it would not re-engineer Windows Explorer for Win98/98SE/Me to address the MS06-015 vulnerability that had been announced in April.

Rather than trying to adopt protective strategies, the spokesperson recommends users should abandon these obsolete systems and adopt Windows XP. However, this means that many older systems will have to be retired. Win98SE has been commonly found on older systems with as little as 64MB of RAM. Minimum hardware requirements for WinXP, however, include a 233MHz processor, 128MB of RAM, and at least 1.5GB of disk space.

These minimum systems should be optimized for use with WinXP by shutting off unnecessary services. The Microsoft Baseline Security Analyzer can be used to help identify unnecessary services. But perhaps the biggest performance boost for WinXP is to disable the Indexing service. Intended to speed up file searches, the Indexing service can actually slow your XP system to a crawl. (See Microsoft Knowledge Base article KB899869 at support.microsoft.com/default.aspx?scid=kb;en-us;899869 for further details.)

Other optimizing steps include eliminating unwanted visual effects, balancing background task priorities, and keeping smaller hard drives free of temporary file clutter. Likewise, putting limits on the page file size can help increase performance. Setting the minimum size to 1.5 times the system RAM and the maximum size to no more than three times the system RAM can keep the page file from overwhelming smaller disk drives.

For IT staff who may have custom applications that can't run under an advanced Windows operating system, there are limited security options. They could follow the advice found in Microsoft Security Bulletin MS06-015, "Vulnerability in Windows Explorer Could Allow Remote Code Execution (908531)." This bulletin suggests that vulnerable systems be placed behind a firewall that filters incoming traffic to TCP Port 139 to protect against the unpatched MS06-015 flaw. Additionally, Internet access and the reception of email should be filtered. These tactics would provide limited security while upgrading to newer Windows systems.

Following in Microsoft's footsteps, several security companies are ending product support of Win9x systems. However, there are still a few that will continue, for the time being, at least, to support older OSes.

One example is F-Secure, which, according to spokesperson Marie Clark, currently supports Win98SE/Me and will continue to do so into 2007. "At this point there is no set date to drop support for these operating systems for our future products, although it will happen eventually," she says. "Once we do drop support, the virus definitions should still work with the older products as long as the user's license is up-to-date."

A Windows Alternative

For companies that would like to find a way to utilize older equipment but are not necessarily attached to Windows, full-time KDE developer Aaron Siego suggests that some Linux distributions can be optimized to run on older hardware or the older hardware can be converted into thin clients for a Linux terminal server.

According to Siego, it is possible to run a Linux distribution with KDE on a 400MHz Pentium II or better with 96MB of RAM. But Siego says that 128 or 256MB of RAM makes a marked performance difference. "However, one will want to run a decently performing desktop distribution," he says. "I find that Kubuntu, SUSE, and Slackware (among others) fit the bill here quite nicely."

Siego says that users of low-end Linux boxes can improve performance by not using a wallpaper and removing all unnecessary services. Further optimization tips for KDE can be found on The K Desktop Environment page at wiki.kde.org.

"Note also that KDE 3.5.3 contains a number of optimizations over even 3.5.2, so for KDE3 'the newer the better' is probably the way to go for smaller systems," Siego says.

Siego also says that a moderate LTSP (Linux Terminal Server Project; www.ltsp.org) server in the $2,000 to $3,000 range could serve dozens of thin Linux clients running on 333MHz Pentiums with as little as 64MB of RAM.

"This is very easy with Linux, as it only requires a net-bootable Ethernet card or a boot floppy," Siego says. "With one moderate server, one can easily serve a modern desktop with speed and style (not to mention centralized administration) to dozens of systems. This is a very inexpensive way to maintain one's investment in older hardware," Siego says.

The Time Has Come

As painful as it may be to some, the end has come for Win98 and its cousins Win98SE and WinMe. Windows-based exploits are mounting daily. McAfee is now projecting that within two years there will be more than 400,000 malware strains. Clearly, hanging on to unpatched machines is not much of an option.

The challenge for IT managers is to find a way to either buy new systems with WinXP installed or to beef up older systems, so they can easily run WinXP. Protecting older systems so they can run custom applications will steadily become more uncomfortable and costly with additional security measures that lead to reduced connectivity with more modern operating systems.

While the Linux option may be attractive to some, the hardware requirements for modern supported Linux distributions can be nearly equal to WinXP. Still, the list of Linux malware is much, much smaller than the Windows malware list. If the Linux option sounds a bit far-fetched, consider that the A/V company Sophos now recommends that home users consider buying Macs rather than cope with the rapidly growing Windows-based malware.

As astonishing as that may seem, we live in astonishing times where malware threats crop up hourly. It's no time to cling to legacy operating systems and increase the risk of a security breach. So long, Win98, it's time for important changes. ◨

> Following in Microsoft's footsteps, several security companies are ending product support of Win9x systems.

Drop The OS, Keep The Hardware

For the adventurous who want to use the older hardware and are willing to abandon Windows, there are a couple of Linux solutions that could work.

Damn Small Linux, also known as DSL Linux, (www.damnsmalllinux.org) and Puppy Linux (www.puppylinux.org) are two very small Linux distributions that are able to run in less than 50 to 60MB of disk space, respectively, either on a bootable CD-ROM or a hard disk.

In our tests, we were able to run Puppy Linux on a Windows 95 vintage Pentium machine with only 48MB of RAM. For DSL Linux, we used an older 133MHz Pentium with 128MB of RAM to see how well DSL performed when loaded into a RAM disk. We were able to surf the Web using a version of Firefox that only used about 17 to 18MB of RAM at reasonable speeds. However, we saw that the processor was pegged at 100% for most of the time.

These Linux versions, interesting as they may be, are largely unsupported. Use these only if you're comfortable with Linux and do not require support.

Away From The RIM

Non-BlackBerry Smartphones For SMEs

by Sandra Kay Miller

• • •

ALTHOUGH RIM (Research In Motion) and NTP have kissed and made up over the patent infringement lawsuit that threatened to bring wireless email to a grinding halt on RIM's entire BlackBerry network in the United States last year, organizations continue to purchase alternative smartphones from other vendors such as Palm, Samsung, Nokia, Motorola, and UTStarcom.

Despite the shutdown scare, RIM Black-Berrys still command the lion's share of the market. According to IDC, RIM shipped 1.04 million BlackBerrys in the United States in the first quarter this year—twice the number of all Palm smartphones.

Into The Enterprise

Last year, Forbes pegged smartphones as the "next embedded interface." Management consulting firm McKinsey & Company surveyed 77 technology executives and found that one-fifth planned to increase budgets in 2006 for increasing their organizations' mobile capabilities.

Ryan Reith, IDC analyst, pointed out that in 2005 businesses accounted for 60% of the 57 million smartphones purchased worldwide, but only 13% were for enterprise deployments. Reith predicts continuing growth on the enterprise side.

Helping to drive that trend, smartphone vendors are integrating richer multimedia features as well as more memory and computing power in their devices, making them more attractive to enterprises that want to port business apps on to a mobile platform.

Also helping to build a better case for smartphones in the enterprise are beefier networks such as the next generation of CDMA (Code Division Multiple Access) EVDO (Evolution Data Optimized) networks, which Verizon Wireless and Sprint Nextel both offer. Later this year Cingular's smartphones will run on its cutting-edge high-speed downlink packet access network.

Non-BlackBerry Options

There are plenty of smartphone alternatives to BlackBerrys for the enterprise. To stack up against the popular RIM devices, at the very least, smartphones need to offer cellular phone service, wireless Internet, email, SMS/IM, paging, corporate data access, and PIM.

Palm (www.palm.com), second to RIM in the smartphone market, has recently released two versions of its popular Treo 700 model—the 700p running the Palm OS and the 700w with Microsoft Windows Mobile OS.

The rich Palm features include an extensive and expandable personal organizer,

> **Smartphone vendors are integrating richer multimedia features as well as more memory and computing power in their devices.**

Write An RFP That Works

Tips On How To Get What You Need The First Time

by Curt Harler

AN RFP (request for proposal) is an invitation to suppliers or vendors to bid on an item or project.

Both RFP and RFQ (request for quotation) are commonly used terms and sometimes blend into one another. However, the RFQ is usually less formal and less detailed. An RFQ will be fairly specific as to the buyer's goals but involves "wiggle room" for both sides to offer give-and-take. The RFQ is basically a fishing trip to find out what is available to meet a buyer's needs.

The RFP, on the other hand, is a formal request from the buyer for a quote on a job or product. If you are writing an RFP, be sure it includes such basics as what your organization wants (product or service specification), when delivery is required, how it will be delivered, who pays for delivery, installation particulars, responsibility for connectivity and configuration, price of the product and ancillary services, financing terms, guarantees or maintenance agreements, and a reasonable amount of time for the vendor to respond.

Government agencies do almost all of their contract work by RFP. Feel free to check their Web sites for the kinds of things they require from a vendor. A good recent example for a wireless broadband network for the city of Grand Rapids, Mich., can be found at www.ci.grand-rapids.mi.us/index.pl?page_id=3928. Note that it clearly outlines project requirements, multiple deadline dates, contact information, and other basic requirements.

Small vs. Big

The connection between the size of the customer company, the scope of the project, and the heft of the RFP is an unfortunate truth, say the people at Link America, a Rowlett, Texas,-based manufacturer and services provider. They both submit and service RFPs from private and public sources.

"I could look at almost any RFP, and without even knowing the company, could tell you how large the company was and whether it had dedicated resources for the RFP," says David Hosking, Link America director of business development, who has had experience at writing RFPs himself in past positions. "I swear that 99% of what is in some RFPs is just job justification. Their job seems to be based on the size of the RFP and how much it weighs."

Andres Ruzo, CEO of Link America, says short response time is the biggest failing among public agency RFPs. "It takes them nine to 12 months to prepare the RFP, but (the vendor gets) two weeks to respond," he says. "Frankly, when the RFP comes out, it's too late for a response. A company needs to have known the RFP was coming, what it was about, and who the players were. If you don't have a line on that, you can't begin to do a good job."

On the private side, Ruzo says the use of benchmarking the pricing presents a real challenge if a vendor wants to maintain any level of profit margin. Both men say that only about a third of the RFPs they deal with are good ones, with clear instructions and a complete package that is delivered all at once. But almost all the good ones are for small projects.

"Nobody has a template for an RFP; everyone has their own style," says Ruzo. "But with clear instructions and documentation—good schematics—you can break the RFP down into pieces and let your team work with it."

Hosking's suggestion is a brief summary. Rather than four pages to describe the desired bolt, for instance, a few lines at the beginning of that section would simply state that a bolt is needed and how many of them. Then the details could begin.

Be sure that any computer-related RFP details the system environment and gives the vendor a good understanding of how the new product or service will fit into the existing framework.

The typical RFP will specify all sorts of network parameters in terms of services required, traffic throughput, reliability, etc. Such statistics as MTBF (mean time between failures) or percentage availability of equipment are keys to getting an objective look at a project.

Do Your Own Homework

One often overlooked aspect of an RFP is setting up the buyer's criteria for what makes a winner. Your evaluation rubric will define which vendor is the ultimate winner. Assign all of the key elements of the RFP a points ranking. Answer such questions as: Does 50% better throughput justify 50% higher price? Is an extended deadline request a deal-breaker? What value will be assigned to a "free" service contract offer? How many "bonus" points does the organization award a vendor with a proven track record?

If and when a buyer accepts a vendor's RFP, it becomes a binding contract. Some RFPs actually have a line at the bottom that has verbiage to the effect of, "ABC Corp. accepts the terms and conditions of the response from XYZ Vendor." Once the buyer signs that line, the RFP becomes binding on both.

What Vendors Want

"Be fair, be equitable," says Terrell Moorer, senior marketing manager at White Rock Networks. That goes both for timing and RFP specifications.

"Stay away from holidays," he says. Having an RFP due right after Thanksgiving or July 4th forces the vendor to leave family and work through the holidays. "If it's due the week of New Year's, we'll do it," he says, "but be considerate."

He notes that most SMEs take two or three months to get their RFP together. "So give us three or four weeks to respond," Moorer says. He says that a vendor should be able to handle a 50-question, two-configuration RFP in a week. But many RFPs have 500 or more questions and require several scenarios.

"I get a lot of RFPs requesting specific technologies," he says. "If you already have a favorite vendor, why do an RFP? Award the contract and move on. Don't waste everyone's time."

Moorer prefers to see an RFP that leaves the door open for suggestions. "An RFP is supposed to get at a solution for the network," he says. "You have a notion of what you want. Set out parameters but leave the solution generic: I want an Ethernet over Sonet solution to take so many connections from A to B." This, he says, gives all the vendors a chance to propose different solutions—and one the SME never considered might just turn out to be the best one. 🄿

Away From The RIM

phone, email access, SMS/IM, and wireless Internet along with an onboard camera for capturing images and video and support for audio. The Treo 700 models sport a 312MHz processor, 240 x 240 (700w) or 320 x 320 (700p) color display (BlackBerry has 320 x 240), and backlit QWERTY keyboard.

The Treo 700w smartphone includes native Microsoft Office Word, Excel, PowerPoint, and Outlook Mobile allowing users to view, edit, and create Word and Excel Mobile files right on the device.

For specialized verticals such as healthcare, financial, IT, real estate, government, and insurance, Palm offers specialized packages to fit specific business requirements. For example, for medical professionals, Epocrates Essentials (www.epocrates.com) provides instant access to clinical data and tools such as integrated drug, disease, and diagnostic information; health insurance formularies; and drug interaction/IV compatibility.

The Samsung (www.samsung .com) i730 EVDO Pocket PC phone from Verizon is the sportster of smartphones with a 520 MHz processor as compared to BlackBerry's 8700 series, which only offers 312MHz. Different in form factor from RIM's devices, the i730 is considered a "slider," meaning the QWERTY keyboard slides open revealing larger keys.

The base OS is Windows Mobile, thus Samsung supports numerous Microsoft applications, including Outlook, Word, Excel, and PowerPoint.

Another popular slider model is the PPC-6700, which is sold under the UTStarcom (www .utsta .com; formerly Audiovox) brand. It was the first Windows Mobile 5 smartphone in the United States and was exclusively sold by Sprint PCS until earlier this year when Verizon introduced the XV6700.

UTStarcom products are manufactured in Taiwan by HTC, one of the major ODMs (original design manufacturers) for smartphones. That means other companies such as Sprint, Verizon, HP, and T-Mobile ultimately brand their products.

The UTStarcom 6700 is a CDMA cellular phone with a 416MHz processor, wireless phone, EVDO, and Wi-Fi data functionality, Bluetooth, email, Internet access, a full QWERTY keyboard, a 1.3MP camera with video capabilities, and a QVGA 240 x 320 transflective color display. It is almost identical in size compared to the Treo 700 series and the Samsung i730.

While the PPC-6700 gives a strong performance as a PDA, its phone features are reported as lacking, especially in reception comparison tests against the Treo 700 and the Samsung i730.

While non-BlackBerry smartphones are attractive for small to midsized enterprises because of their rich feature set and growing integration with Microsoft applications and networks, the deciding factor for larger organizations to choose a RIM solution remains the BlackBerry Enterprise Solution, which offers centralized role-based and group-based administration, tight integration with enterprise-class IM systems (Lotus Sametime, Novell Groupwise Messenger, and Microsoft Live Communications Server and Messenger), extensive developer tools for custom applications, and comprehensive security features—critical to organizations bound by regulator compliance.

As non-BlackBerry devices make their way into the enterprise, similar features aren't far off. ▣

A Few Smartphones To Consider

Manufacturer & Model	Price	Features
Motorola Q	$299.99 ($199.99 with two-year contract and online discount at press time)	Windows Mobile 5.0, infrared, Bluetooth, 1.3MP camera, mini SD, EVDO, 128MB of flash memory, 64MB of RAM, four hours talk time, and up to 212 hours standby
Palm Treo 700p & 700w	As low as $399, depending on service provider	The 700w is the first Palm device to run Windows Mobile. (The 700p runs Palm OS.) Dual band, Wi-Fi, Bluetooth, up to 4.7 hours talk time and 15 days standby, 1.3MP camera, 128MB memory, expansion slots accept SD or MMC cards
Samsung SCH i730	$699.99, phone only	Windows Mobile 2003, Wi-Fi, Bluetooth, EVDO (Evolution Data Optimized) cellular broadband, CDMA (Code Division Multiple Access), 1xRTT, IrDA, SD card, 64MB of RAM, 128MB of flash memory, 2.2 hours talk time, and 130 hours standby
Sprint PPC-6700	$599.99 ($299.99 after discounts at press time)	Windows Mobile 5.0, Bluetooth, Wi-Fi, EVDO, mini SD slot, 64MB RAM, 128MB flash ROM, stylus built into the antenna, standard mini-USB port, 1.3MP camera, up to 4.7 hours talk time, and 200 hours standby
T-Mobile Compact SDA	$299.99 ($149.99 after discounts at press time)	Windows Mobile 5.0, Wi-Fi, Bluetooth, EDGE (Enhanced Data rates for GSM Evolution) data network, quad band, 1.3MP camera, up to 4.5 hours talk time, and eight days standby

Good News For Enterprise Database Acrobatics

"Drop the Plates, It's Time For A Break"

by Chris A. MacKinnon

• • •

REMEMBER WHEN running a database meant balancing two spinning plates in your hands while doing jumping jacks and trying to whistle at the same time with a mouth full of crackers? If you talk to any sound database administrator or developer, you'll soon find out that the database circus still exists today. Even though database administration doesn't really require plate spinning, Niels Gron, spokesperson for AquaFold (www.aquafold.com), says many database administrators are caught in the balancing act of running multiple applications to interact with their own databases. He says the two biggest issues facing the database industry today are usability and task automation.

Depending on your requirements and budget, there is a healthy list of relational database products to choose from. Gron says there are at least a half-dozen vendors in the industry providing very functional tools that are meeting the needs of many customers. But, he says, AquaFold believes that the industry is still very young. He notes, "Products have not changed much over the last decade. Relational databases are becoming cheaper and easier to deploy, and users are demanding more sophisticated and easier-to-use tools. The demand for quality and affordable tools is very high, and vendors are having a hard time providing the quality level that users are looking for."

The Hurdles

According to Gron, one of the biggest hurdles for all vendors is finding the right breed of talented people who understand the requirements and needs of database users and who can translate those needs into products.

Back to usability and task automation. Gron says, by far, these are the two biggest issues plaguing the relational database industry today. He notes, "The usability in current tools leaves much to be desired. They have not reached the usability of other sectors such as word processors, Java IDEs, or spreadsheets. But the automation of tasks is probably the biggest challenge. The needs and requirements for users are extensive, and defining and implementing them all is a huge challenge."

Gron says in the same way that Java development has been transformed by automation, so too can database tasks be transformed. He says, "Java development tools have been revolutionized with refactoring features. Refactoring provides developers with a set of defined tasks to automate the process of changing code, which in turn saves countless man hours and eliminates human error." Gron says AquaFold believes the same idea can be applied to database tools by providing sets of predefined tasks that automate the day-to-day tasks that developers and administrators perform. He says, "Current vendors focus their tool functionality to either database administrators or database developers. Our goal is to provide a tool with the full needs of all users."

In Gron's opinion, it's enterprises that will be interested in AquaFold's approach to database administration. AquaFold's Aqua Data Studio product allows individuals to use one tool with a common interface to interact with any database they need, no matter the vendor. The company's Web site reads, "Aqua Data Studio provides an integrated database environment with a single consistent interface to all major relational databases. This allows the database administrator or developer to tackle multiple tasks simultaneously from one application." In addition to this, Aqua Data Studio goes even further and automates many of the database tasks that administrators and developers perform in an effort to make them more productive.

It's Break Time

One of the best facts about Aqua Data Studio is that it was designed from day one to run on any OS and to work with any relational database. Built with the Java programming language and using the standard JDBC API and JDBC drivers, Aqua Data Studio runs on Windows, Mac OS X, Linux, Solaris, and FreeBSD and can

AQUAFOLD

interact with all major relational databases such as Oracle, DB2, Sybase, SQL Server, MySQL, PostgreSQL, and Informix.

Gron notes that the biggest value for IT managers is the time that employees will save in learning how to use the tools. He comments, "Having to learn a new tool depending on what OS you are running on or what relational database you are working with can be very time consuming for each employee. Learning how to use Aqua Data Studio not only saves you the time of learning other tools; it also makes it much easier to learn how to work with a different relational database."

AquaFold also has a unique approach in providing the best tool for the job. Gron says while other vendors have similar tools, they differ in a big way. He says, "Some vendors take a depth approach where they try to provide the best tool for one database. Other vendors have taken a breadth approach by providing a generic query tool for database sources. Our tool, on the other hand, provides both a breadth and depth approach by providing a complete feature set for all databases on all platforms."

Gron says the database tools industry is a very well-defined market. He says Aqua-Fold has seen very little innovation in the relational database space for some time. "This is the reason we entered the market, in the hopes to provide new innovations. Quest Software and Embarcadero Technologies are the two largest vendors in the space. Their products also span into database design and monitoring tools, an area we also hope to enter."

Although AquaFold just released a new version of Aqua Data Studio, the California-based database solution provider is hard at work on the next version of the software, which should be out by the end of this year. Gron says the new version will further enhance usability and add even more task automation. This is even better news for the database circus acrobats of the enterprise. Databases are growing at a phenomenal rate, and the number of users is also increasing. But given this fact, administrators don't have to wear themselves out in the database circus sweatshops, especially when today's database technology can be concentrated and automated.

TWO TERMS

▌ RBL (Real-time Black List; also known as DNS Blackhole List)

What it is: A technology used to create Internet-based lists of IP addresses for sites known to be involved in spamming. The reason behind the lists is to create an easy way for email server software to quickly determine whether an email message originated from one of these questionable sites. The technology is part of the Internet's DNS (domain name server) system.

Why you should care: Spam swallows the majority of Internet email traffic sent today in a tidal wave of unsolicited ads peddling everything from vitamins to can't-miss weight loss products. Worse yet, some spam messages contain questionable content that may offend employees in your business if you don't take appropriate measures to stop them. Finally, some spam messages carry malware payloads that can cripple your system. So, your business needs multifaceted technology that can fight spam in a number of ways.

Related products and manufacturers: Products include Sunbelt Software Messaging Ninja, Trend Micro RBL+ Service, Invariant Systems URI Lookup Tool, Kerio MailServer5, Sendmail 8.12.8, and others.

▌ SPF (Sender Policy Framework)

What it is: SPF extends the SMTP (Simple Mail Transfer Protocol) by allowing email software to detect forged email addresses. Forged email addresses are one of the techniques used by spammers to defeat email filters and gain access to email systems. SPF was needed to get around an SMTP weakness that allows any computer to send email using any email address. SPF allows Internet domain owners to use DNS to specify legitimate computers allowed to send emails from that domain.

Why you should care: When Internet protocols were first developed, no one ever thought spam would become the terrible nuisance it is today. So many of these protocols were not developed with spam front and center in the minds of the developers who created them. It's important to choose antispam tools that provide multifaceted protection because spammers know multiple ways to defeat defenses and get their unwanted messages through.

Related products and manufacturers: Sunbelt Software Messaging Ninja, GFI MailEssentials 10.1, NetWin Surge-Mail Server, Deerfield.com VisNetic Mail Server, and others. SPF can also be added to established mail server products, such as Exchange.

Next Week In *Processor* . . .

Coming In Our July 21 Issue: Survey after survey shows that power and cooling are the two top concerns for data center/IT managers in the coming months. Find out what manufacturers are doing to make hardware cooler and more energy-efficient. We also take a look at why DC power is gaining attention.

You'll also find:

- Why security covering IM, IP telephony, and other content is becoming increasingly important
- How inline patching reduces the need for patch installation and support
- Tips to improve your change management process
- How you can put your IT skills to work for a charitable cause

Be sure to visit Processor.com to find each week's issue online. You can view issues as a PDF or search our article database for the information you need.

MONITORS / PROJECTORS

15 / 17"" Hitachi LCD Monitor Black . . . .$150 / 170
17" HP / Compaq 1740 LCD Monitor Black $195
17" Sharp LCD 1280x1024 0.26mm Black / White $161
3M Company LCD Projector 1200ANSI 5.5LB's $680
HP Digital Projector VP6121 DLP 1024x768 2000ANSI . .$665
HP Digital Projector xp8020 DLP 3100 ANSI Lum $1940
HP Home Cinema Digital Projector ep7110 DLP Projector L1688A $710

NOTEBOOKS

HP Pavilion dv1000 P-M
2.0GHz 512mb 100gb DVDRW 14" $859
HP Pavilion zd7000
P4 3.2GHz 512mb 100gb DVD+RW 17" $1,450
HPnc8200 PM
1.7GHz 40gb 512mb DVD-CDRW WLAN 15.4WXGA XP . .$655
HPnc6000 P-M
1.7GHz 60gb DVD+RW 14" XP $750
HP Presario V2405 Turion 1.8GHz 60gb DVD+RW 14" . . .$655

We Have a Large Selection of Notebooks
Low Price Guaranteed!

SYSTEMS / SERVERS

IBM eServer 326 8848 Rack Opteron
2GHz 1GB SCSI Hot-Swap 1U $859
IBM xSeries 445
RSAII-EXA 8870 Rack Xeon 3GHz (2P) 2GB $6000
HP ProLiant ML350 G4
Tower 1 x Xeon 3.4GHz RAM 1GB $980
HP WS xw4300
3.2GHz 512MB 80GB DVDRW $1000

DIGITAL CAMERAS

HP PhotoSmart 735XI 3.0MP 3x optical $74
Sony Cyber-shot 5.1 MP 3x Optical DSC-W5 . . . .$198
Vivitar Vivicam 10/ ViviCam 20 silver/blue/Red $10/11
Vivitar ViviCam 3915 Digital Camera 5.0MP x2 . . . .$71
Samsung Digimax 4500 4.1MP 3x Optical $111
Vivitar ViviCam 3340 1.3MP/ViviCam 3695 2.0MP $16/25
Creative PC-Cam 900 2.1 MP Flash $35
Logitech QuickCam WebCam w/ Mic USB $17

PDAs / PDA Accessories

HP IPQ H1945/HX2410 PDA USB $265/160
PALM Zire 31 PDA / P80708US $26
HP Mirco Keyboard / FA162A#AC3 . . . .$16
TARGUS Universal WI-FI Keyboard $38

We handle full line of new and refurbished CISCO networking equipment.

HARD DRIVES - IDE & SCSI

IDE Hard Drives
1 - 30gb IDE . . . .$ Check Web
40 / 80gb IDE 5400/7200RPM . . . .$ 30 / 47
120 / 160gb IDE 5400/7200RPM . . . .$57 / 67
180 / 250gb IDE 7200RPM . . . .$ 85 / 181
SCSI Hard Drives
18-36gb U160 10K SCSI 80pin / 68pin / FC . . . .$36 / 69
18-36gb U320 15K SCSI 80pin / 68pin /FC . . . .$57 / 83
73-146gb U160/U320 10K SCSI 68pin, 80pin /FC . .$129 / 177
73-146gb U320 15K SCSI 68pin, 80pin/ FC . . . . .$179 / 579
ST336607FC / ST3146807LC / MAU3147NP $79/239/567
300GB U320 10K SCSI80pin / 68pin . . . .$ 503/769
Notebook HDDs
HDD under 20gb . . . . .Check Web
20-60gb 2.5" Toshiba / Fujitsu/ Hitachi / WD . . . .$40 /57
80-120gb 2.5" Toshiba / Fujitsu / Hitachi / WD $83/129
40-120gb 2.5" SATA Hitachi / Seagate / Fujitsu $66/195
20-60gb 1.8" ZIF / PCMCI Toshiba / Hitachi $59/169

Visit Our Web Site For
Complete Selection of Hard Drives!

TAPE DRIVES

EXABYTE / QUANTUM / IBM
EXB-8900 Tape Drive 8mm Tape 20GB/40GB Int SCSI . .$375
35/70GB Quantum DL7000 Int. SE SCSI $280
IBM Tape Drive 100GB/200GB Internal SCSI 00N8016 . . . .$1080

HP / COMPAQ
StorageWorks ESL9595 Tape Drive Lib 330833-B21 . .$14,000
20/40GB Compaq DLT Drive, DLT 1x20GB/40GB Ext. . . .$380
20/40GB Compaq Business StorageWorks DAT Int. Auto $425
20/40GB HP DLT4000 SCSI SE Narr Sure Store DLT40R . .$390
HP SureStore DLT 80K Tape Drive SCSI LVD Rack $780
40/80GB Hp/compaq DLT VS80 Int. SCSI LVD/SE $750
200/400GB StorageWorks Ultrium 460e TD LTO Ext. $1845
100/200GB StorageWorks Ultrium 230i TD LTO Int $1600
400/800GB Storageworks Ultrium 960 Tape Drive SCSI $2,150
200/400GB StorageWorks Ultrium 48 Ext. LTOUltrium . .$1600

We sell HP, Compaq, IBM.
Call us or go to our site for more!

OPTICAL DRIVES

Sony 650MB Magneto Optical Drive SCSI 5.25" $7
48x HP CD / Floppy Combo Internal HP DL320 G2 . . . . . .$31
4X4X24 HP CDR-W EIDE Internal D4398A $11
52X32X52 Memorex CDR-W External USB 2.0 . . . .$26
52X24X52X16 Iomega CDRW/DVD External USB 2.0 . . . . .$40
10X HP DVD-Rom SCSI Internal C7499A $160
6X HP DVD-Rom IDE Internal For OmniBook $90
2.4x24x24x8 Samsung CDR-W / DVD Internal Slim $37

FLASH MEMORY/USB PEN DRIVE

256 / 512 / 2gb /4gb Compact Flash $13/19/49/91
512 / 1gb /2gb Memory Stick . . . .$3 / 52 / 88
512mb / 1gb / 2gb / 4gb Secure Digital . . . . .$19 / 25 / 49 / 96
512mb/ 1gb / 2gb Multimedia Card . . . .$29 / 56 / 97 / 235
128mb / 256mb / 512mb USB 2.0 Flash Drive . . . . .$14 / 15 / 19
1gb / 2gb / 4gb / 8gb USB 2.0 Flash Drive . . . .$61 / 118 / 228
4gb / 8gb / 16gb IDE Flash Drive . . . .$199/ 335 / 565

We Carry all Types and Brands of MEMORY AND CPUs
Please visit our WEB to check

ZIP DRIVES

2.2gb Castlewood ORB Intern/External SCSI . . . .$15 /31
750mb Iomega ZIP Drive External FireWire $59
250mb Iomega ZIP Drive Internal $31
250mb HP Zip For E700 V300 N400C N600C N610C $18

VIDEO CARDS

Matrox
16 / 32mb Matrox G450 Dual AGP . . . .$6 / 30
32mb Matrox G450 / G550 Dual Head PCI . . . .$78 / 80
32MB Matrox G200 Quad PCI $148
64mb Parhelia P650 / P750 AGP . . . .$125 / 185
64mb Matrox G450 MM / Qid Quad MM PCI . . . . . .$565 / 575
nVidia
16MB / 32MB Riva TNT / Vanta . . . .$8 / 14
32MB / 64MB Beforce2 AGP . . . .$11 / 17
64MB / 128MB Geforce4 TI4200 AGP . . . .$23 / 39
64MB Quadro4 280NVS / 400NVS PCI $125 345
64MB Quadro4 200NVS / 280NVS PCI-Express . . .$70 /99
64MB Quadro4 000NVS / 280NVS AGP . . . .$30 / 45
64MB Quadro4 380NVS / 750NVS AGP . . . .$35 / 215
64MB PNY Quadro4 700XGL / 500XGL PCI . . . .$36 / 42
128MB Quadro4 900XGL / 980XGL AGP . . . .$140 / 399
128MB Quadro FX1000 / FX1100 AGP . . . .$140 / 399
128MB Quadro FX1300 / FX 1400 . . . .$399 / 550
256MB Quadro FX3000 / FX3400 . . . .$299 / 989
256MB Quadro FX3450 / FX4000 . . . .$885 / 1090
256MB Quadro FX4400 / FX4500 . . . .$1290 / 1450
256MB GeForce FX5600 / FX5700 AGP $55
128mb 3Dlabs Wildcat 4 7110 AGP $250
Appian
64MB Radeon VE Rushmore Quad PCI $34
64MB Appian Radeon Typhoon VE AGP / PCI $129
64MB Appian X4 DVI-I Quad Monitor PCI $189
128MB Appian Phoenix Radeon 9000 QD PCI Quad $410
ATI / Powered by ATI
16MB / 32MB AT Rage . . . .$9 / 14
32MB / 64MB ATI Radeon 7000 PCI . . . .$18 / 35
64MB / 128MB Radeon9200 Pro AGP . . . .$17 / 32
64MB / 128MB Radeon X300 PCI-E . . . .$21 /38
128MB Radeon 9600 XT 9600 AGP . . . .$70 / 37
128MB Radeon 9700 Pro / 9800 Pro AGP . . . .$78 / 91
128MB ATI V3100 / V5100 PCI-E . . . .$99 / 355
256MB ATI Fire GL V7100 PCI-E $535
256mb Radeon X850 XT Platinum VIVO PCI-E $285
256MB ATI Fire GL X2 / X3 AGP . . . .$285 / 615

PRINTERS / SCANNERS / ACCESS

HP 2500CM InkJet Pro Color $85
HP DeskJet 9680 ColorInkJet / 5850w Color InkJet . . . .$550 / 95
HP PhotoSmart 8150 / 8450 Photot InkJet Printer . . . .$54 / 85
HP DeskJet 5440 Photo InkJet Printer $29
Zebra/Eltron LP2348 Plus Label Printer 120618-001 . . . . .$291
HP LaserJet 4200n 220V $582
LaserJet 4250DTNSL 220V Laser Printer $799
HP LaserJet 4250TN220V/ LaserJet 4350N 220V . . .$750 / 75
HP 5BIN Mailbox w/ stapler for LJ 8000/8100/8150 . . . . .$550
HP 9200C Digital Sender Flatbed/Sheetfed Scanner Q5916A $2050

888-644-7017
Fax: 425-251-5000

NETWORK PRODUCT

3COM Modules / Hubs / Switches
3C16686,   3C16805,   3C16810 . . . .$12 / 46 / 65
3C16960,   3C16971,   3C16975 . . . .$32 / 75 / 180
3C16976,   3C16977,   3C16610 . . . .$125 / 92 / 130
3C16611,   3C16665A, 3C16951 . . . .$75 / 580 / 50
3C16954,   3C16980,   3C16980A . . . .$73 / 90 / 145
3C17100,   3C17111,   3C17131 . . . .$285 / 390 / 575
3C17203,   3C17204,   3C17205 . . . .$556 / 2377 / 1325
3C17221,   3C17701,   3C17711 . . . .$205 / 1185 / 700
3C17706,   3C17712   3C32700A . . . . . .$3895 / 2605 / 850
3CGBIC91, 3CGBIC92, 3CRWE825075AUS . .$130 / 185 / 195

HP / HP Jet Direct Print Servers
J3112A / J3113A / J3110A . . . .$9 / 59 / 73
J3111A / J4169A / J2550A . . . .$38 / 200 / 27
J4100A / J4101A / J4106A . . . .$80 / 181 / 145
J6057A / J7934A / J7942A . . . .$173 / 383 / 104
J2591A / J3258 / J2591A . . . .$58 / 81 / 58
J3265A / J4154A / J4110A . . . .$132 / 36 / 600
J4111A / J4113A / J4844A . . . .$48 / 175 / 850
J4845A / J7934G / J3263A . . . .$1727 / 210 / 179
J4135A / J6044A / J3258B . . . .$114 / 154 / 89
J6035C / J4102B / J4121A . . . .$129 / 106 / 534
J4167A / J3258A / J2556B . . . .$46 / 81 / 89

QLogic
QLA220033 / QLA220066 . . . .$170 / 90
QLA2312F / QLA2200F66 . . . .$450 / 250
QLA210033 / QLA210066 . . . .$120 / 260
QLA2202FCK / QLA2342 . . . .$1320 / 1035
LP10000E / LP8000 . . . .$749 / 80

Cisco Routers / Modules
Switch WSC295012 / WSC2955S12 . . . .$550 / 1660
Routers CISCO1721 / CISCO2612 . . . .$650 / 2000
Routers CISCO7206RF / CISCO3845 . . . .$2687 / 9400
Modules WS-X2861 / WSX5410 . . . .$100 / 660
GIGABIT Module WSG5486 / WSG5487 . . . .$ 70 / 230
LAN Adapter GLCSXMM / GLCLHSM . . . .$100 / 120

HP StorageWorks
ESL9595 P/N 330833-B21
External Tape Library
400 Slots

MSRP $112,000
CompuVest Price . . $67,000